

OFFSHORE OPERATORS COMMITTEE

October 17, 2016

Water Protection Division  
U.S. EPA Region 4  
San Nunn Atlanta Federal Center  
NPDES Permits Section  
61 Forsyth Street SW  
Atlanta, GA 30303  
Attention: Ms. Bridget Staples, NPDES Offshore Oil and Gas Coordinator

**RE: Offshore Operators Committee Comments  
Notice of Proposed National Pollutant Discharge Elimination System (NPDES)  
General Permit for New and Existing Sources in the Offshore Subcategory of the  
Oil and Gas Extraction Category for the Eastern Portion of the Outer Continental  
Shelf (OCS) of the Gulf of Mexico (GEG460000), Public Notice No. 16AL00001.**

Dear Ms. Staples:

The Offshore Operators Committee (OOC) appreciates the opportunity to submit detailed comments on the proposed general permit. OOC member companies represent approximately 90% of the oil and gas production in the Gulf of Mexico OCS, and the proposed changes to the NPDES permit have the potential to impact existing and future operations of all our member companies.

The OOC's comments are shown in the attached Table, supported by additional attachments. Comments submitted on behalf of the OOC are submitted without prejudice to any member's right to have or express different or opposing views. The OOC has reviewed the Draft Environmental Assessment (EA) and supports the proposed findings of no significant impact (FONSI). The only recommended change to the EA is consistency within sections 1.3.4.2 and 3.6.3.3 (Deepwater Horizon impact).

OOC believes all of the comments are of importance to provide a protective and practical permit. We wish to draw attention to three of the comments that are of particular importance to OOC Members. Provided below is an overview summary of each:

#### **1. Electronic NOI/NOT/DMR – Comments 1-3 and 6**

EPA's proposal to implement electronic reporting by a deadline of 12/31/2016 to end all paper submittals seems unrealistic and not feasible to ensure the system is properly coded and operational. Extensive experience with implementing identical programs in EPA

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Region 6 revealed that adequate time and IT support are required. OOC would like the opportunity to provide input during the NetDMR development process and to Beta test the eNOI system and NetDMR tool before the systems are rolled out for final use. Our comments detail further information as well as additional requests related to permitting and reporting.

## **2. Toxicity Testing of Well Treatment, Completion & Workover Fluids – Comments 9-10, 4, 8, 11 & 13-15**

OOO is requesting the permit language be modified to clarify that the chronic and acute toxicity testing requirements are not limitations, but monitoring only requirements. OOC is also proposing several practical clarifications to help implement the proposed toxicity testing. Further, OOC is proposing conservative simplifications around toxicity testing frequencies to support implementation. Finally, we have grave concerns related to managing Confidential Business Information proposed in the well fluid constituent reporting requirements. Our comments detail further information as well as additional requests related to this testing and reporting.

## **3. CWIS Entrainment Monitoring – Comment 19**

OOO strongly objects to the continued requirement to conduct ongoing entrainment monitoring (after initial two year biweekly sampling). EPA's own conclusion (section 6.1 of the Draft Environmental Assessment) , is *"that cooling water intake structures on offshore oil and gas facilities have no significant impact on the selected species investigated"*. As the species studied were reliable indicators for overall entrainment, and given no species of concern were caught within the 60,376 individuals identified from 1,515 tows spread throughout the 24 month sampling period, the Agency has no basis to continue to require costly on platform monitoring at affected facilities.

OOO is therefore petitioning the EPA per their proposed language at Part I.D.3.d.ii.(page 70 of draft permit) to reduce monitoring frequency to "none required". If EPA still feels monitoring in some form is required OOC is proposing to use the SEAMAP database, which will provide a more comprehensive, cost-effective mechanism for gauging the seasonality of entrainment potential over time. Such SEAMAP reporting could be done by the Agency's review of this data set or by a permit requirement for industry to submit annual reports on the SEAMAP data.

To be clear, OOC is not requesting deletion or change to the two year study requirements for newly affected facilities.

Our comments also detail further information as well as additional requests related to the CWIS portions of the draft permit.

**OOO can coordinate and schedule a face to face meeting to discuss our comments, answer questions and provide any needed clarifications.**

We appreciate your time and efforts regarding the draft permit. If you have any questions or if additional information is needed, please contact me at (504) 934-2159 or at [greg@offshoreoperators.com](mailto:greg@offshoreoperators.com) or Mr. James Durbin, CK Associates, at (225) 923-6925 or at [james.durbin@c-ka.com](mailto:james.durbin@c-ka.com).

Yours truly,

A handwritten signature in cursive script that reads "Greg Southworth".

Greg Southworth  
Associate Director  
Offshore Operators Committee



## Draft NPDES General Permit for New and Existing Sources in the Offshore Subcategory of the Oil and Gas Extraction Category for the Eastern Portion of the Outer Continental Shelf of the Gulf of Mexico (GEG460000)

### GEG460000 August 18, 2016 Draft Renewal Permit, Public Notice No. 16 AL00001 – Offshore Operators Committee Comments

General Note – all permit text is shown in quotations. All suggested revisions to the proposed permit text are shown in red and ~~strike-throughs~~ within OOC’s comments

Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
1.	Notification Requirements (Existing Sources and New Sources)	Part I.A.4	<p>“EPA will accept a written NOI until December 31, 2016. Beginning January 1, 2017 through the expiration date of this permit, all NOI must be submitted electronically. However, if the electronic NOI system is not operational by January 1, 2017, or at any time through the expiration date of this permit, EPA will accept a written NOI. Once the system becomes operational, an electronic NOI will need to be submitted. For an NOI submitted in writing, the effective date of coverage will be the postmarked date of the NOI, or if the postmarked date is illegible, the effective date of coverage will be two days prior to the receipt date of the NOI. Beginning January 1, 2017, the effective date of coverage submitted electronically will be the date of the request. EPA will notify the applicant within 21 days of the receipt date regarding the new permit coverage number(s) and effective date of permit coverage. If an NOI is determined to be incomplete, EPA will notify the applicant within 21 days of receipt of the NOI regarding any discrepancies, and/or possible termination of coverage. Information regarding electronic submittals of NOIs is contained in Part III of this permit.”</p>	<p><u>OOC requests</u> additional language be added to text.</p> <p>EPA is proposing to require electronic Notice of Intent and Termination Forms and Discharge Monitoring Reports be in use as of January 1, 2017. While OOC understands the Region’s push to go electronic for all reporting a deadline of 12/31/2016 to end all paper submittals seems unrealistic. Currently Region IV requires 22 points of data for each eNOI, the current system in use in Region VI requires half as many if Cooling Water Intake is included. It does not seem feasible that a revamped form can be coded by the Government contractors correctly in less than 6 months, not to mention the expense of computer system updates. Requiring paper NOIs at the time of permit issuance and then electronically by the end of the year would mean double work for both the Agency and permittees. Also, it is unclear how written NOIs submitted prior to December 31, 2016 will be available for reporting in the NetDMR system.</p>
2.	Electronic Reporting	Part III.A	<p>“<u>Electronic Reporting</u>. Due to the e-reporting regulations which require electronic submittal of NPDES reports and forms, EPA will accept but not process any written NOI after December 31, 2016. Upon availability, but no later than January 1, 2017, permittees will be able to electronically submit NOIs and NOTs via the eNOI system and NOTs via email. However, if the electronic eNOI system is not operational by January 1, 2017, or at any time through the expiration date of this permit, EPA will accept a written NOI and NOT. Once the system becomes operational, an electronic NOI/NOT will need to be submitted. Additionally, DMRs must be submitted via the Network Discharge Monitoring Report (NetDMR) tool. If the NetDMR tool is not operational by January 2017 or at any time through the expiration date of this permit, a Certification Letter can be submitted in lieu of the electronic copy. The postmark on the Certification Letter on or before the DMR due date would demonstrate timely reporting was attempted while the system is down. Once the NetDMR tool becomes operational, an electronic DMR will need to be submitted. Once finalized, instructions for all electronic submittals will be posted on EPA website at: <a href="http://www.epa.gov/aboutepa/about-epa-region-4-southeast">http://www.epa.gov/aboutepa/about-epa-region-4-southeast</a></p>	<ol style="list-style-type: none"> <li><u>OOC is requesting</u> that rather than duplicate work by submitting both paper and electronic DMRs for a quarter where the system is unavailable, a Certification Letter be acceptable. The Certification Letter would contain the permit certification statement and a list of Permitted Feature ID numbers for which reporting is required for that quarter. A paper DMR will not be submitted. Once the NetDMR tool is available, the electronic DMR will be submitted.</li> <li><u>OOC requests</u> the opportunity to have input during the NetDMR development process to share lessons learned from Region VI since 2012: Our past experience has been that the longer the eNOI system and NetDMR tool can be BETA tested, the more likely an efficient and correct outcome. Region VI is still waiting for funds to make corrections that were noted in 2012 when the NetDMR tool was tested and other changes that have been identified during the last four years. Time is also needed for the Agency to compile a detailed set of DMR Instructions to avoid the misapplication of NODI codes and reporting discrepancies experienced in Region VI. The lack of instructions has caused confusion for operators and BSEE inspectors.</li> <li><u>OOC requests</u> the ability to BETA test the eNOI system and NetDMR tool before the systems are rolled out for final use.</li> <li><u>OOC requests</u> that a copy of instructions be provided for NetDMR and NODI Codes.</li> </ol>







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			Until such time, signed copies of these and all other reports required by Part II.D. shall be submitted to the following address:  Director Water Protection Division U.S. EPA Region 4 Sam Nunn Atlanta Federal Center 61 Forsyth Street, S.W. Atlanta, GA 30303-8960”	5. <u>OOC requests</u> that NOTs should go through the electronic reporting system and not e-mail. This will ensure consistency with all other electronic reporting requirements. When using e-mails as a way to file electronic submissions, they can be deleted or misplaced which could lead to enforcement for missing DMR reporting deadlines.  6. <u>OOC requests</u> EPA align the dates for accepting written NOI submittal between parts I.A.4 (December 31, 2016) and III.A (December 16, 2016)
3	Monitoring Reports	Part III.A	“Monitoring Reports”  “Monitoring results obtained for each 3-month period (i.e., quarter), starting with the first month of coverage under this permit, shall be summarized for that timeframe and reported on either a DMR form (EPA No. 3320-1) or optional EPA Region 4 approved form, and shall be postmarked no later than <del>the 28th day of the month</del> 60 days following the completed quarterly period. For example, for coverage beginning on January 1, data for January 1 to March 31 shall be submitted by <del>April 28th</del> May 30th”	<u>The OOC requests</u> that EPA provide a 60 day submittal for Quarterly DMRs. Currently the permit allows for submittal of DMR’s 28 days after the Quarter ends. There is a large amount of data that must go through QA/QC before the data can be inputted into NetDMR and once populated the Industry must review for correctness. There are multiple Companies and Consultants that have to submit <b><u>between 2,500 and 4,000 DMRs a quarter between Region 4 and Region 6</u></b> . The extension of 60 days from 30 days will allow the industry to populate NetDMR with quality data.
4	Notification Requirements (Existing Sources and New Sources)	Part I.A.4.u	<del>u. Information on the identity, as listed on the applicable SDS, and concentration of each specific chemical composition constituent, intentionally added to the well treatment, completion of work over fluid of any additives currently being used and discharged or proposed for use and discharge in well treatment, completion or workover operations or as biocides for sump/drain systems. If the information on the additive is not known at the time of the submittal of this NOI, operators shall include the information in a report that shall be submitted on to EPA Region 4 on September 30<sup>th</sup> of each year or with the alternative study report of Part I.B.6.b. If an operator participates in the alternative study, then annual information submittal is not required. Operators may submit this information marked as “Confidential Business Information” or other suitable form of notice or may have service providers independently submit this information marked as such if necessary. The information so marked shall be treated as information subject to a business confidentiality claim pursuant to 40 CFR Part 2. Aside from submitting this information with the NOI, this information is also required to be recorded and retained on site for no less than five years from the issuance date of the permit, except for Confidential Business Information which may be maintained securely offsite by the operator or relevant service provider, for no less than five years from the issuance date of the permit. See Part I.B.6.a.iii.</del>	<u>OOC requests</u> this revision to provide clarity, alignment and consistency with GMG290000 (Part I.B.12) permit requirements.  Additionally, <u>OOC requests</u> changes to include language that an operator is not required to submit annual information if the operator is participating in the Part I.B.6.b alternative study; which would include this information and for alignment with Part I.B.6 of the permit for discharges.  Also, <u>OOC requests</u> that any requirements for disclosure of treatment, completion and workover fluid compositional information be clarified as to the extent of disclosure required. Proposed revision reflects a requirement for disclosure of composition as described on the SDS for relevant additives.  Additionally, <u>OOC requests</u> that the disclosure requirement allow for the use of a “systems-style” disclosure of the chemical composition of all additives in a fluid (or fluids, in the case of multiple disclosed applications), consistent with the approach that has been adopted for use in certain jurisdictions and by FracFocus. System-style disclosure would satisfy the objectives of the permit revision while potentially reducing the necessity for companies to make confidential business information claims on such disclosures. The process known as system-style disclosure lists all known chemical constituents in a fluid (or fluids, in the case of multiple disclosed applications), but decouples those constituents from their parent additives, thus improving protection of the proprietary chemistry used in hydraulic fracturing while promoting greater disclosure. At the same time, reverse engineering of product formulas may still be possible with the use of a systems-style disclosure. A chemist or chemical engineer who knows the industry and the well treatment process will be familiar with the types of chemicals (usually a limited number) that have typically been used in a particular type of additive. The chemist or chemical engineer will be able to determine in most cases what role each chemical in the list plays in the overall product formulation and would be able to identify the ingredients included in the proprietary product. The chemist or chemical engineer will also be able to determine the general proportions that each ingredient would constitute of the whole (again with assistance from information on the product’s Safety Data Sheet which include additional concentration information for various hazardous ingredients). Therefore, in order to protect the substantial investment of time and resources in developing proprietary products, it is



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				<p>critical that operators and service companies have the ability to protect proprietary information as Confidential Business Information even when using a systems-style approach.</p> <p>Also, <u>OOO requests</u> that service providers be permitted to disclose the trade secret/CBI information directly to EPA rather than requiring disclosure through the operators. Such independent disclosure is necessary in order to protect the substantial investment of time and resources that service providers make in developing proprietary products. Chemical additives play a critical role in the safety, efficiency and productivity of offshore wells, and access to newly-developed, ever-improving chemicals—be they “greener,” more efficient or more effective—is in turn critical to continued improvements in offshore operations.</p> <p>Lastly, <u>OOO requests</u> deletion of the information requirement for biocide. From the below information and SDS, the small amount of biocides used in sump/drain systems will have a minimal risk to the environment and it does not warrant reporting in the NOI or in an annual report (Note that GMG 290000 does not require this reporting).</p> <p>a) <u>Biocide Fate in Drain/Sump Systems:</u></p> <p>The most common types of biocides used in the OCS for drain/sump treatment are: Gluteraldehyde (GLUT) and Tetrakis hydroxymethyl phosphonium sulfate (THPS). Dosage and frequency of use ranges from infrequent, small volumes to weekly dosing at 5-20 gallons into either drains or the skim pile or associated pre-sumps. The biocides are applied as aqueous solutions ranging from 20-100% concentrations. Note that low-hydrocarbon potential drains (e.g. from non-process areas) would not typically be treated with biocide.</p> <p>It is important to recognize that treatment with biocide does not equal direct discharge of biocide to the environment. Because these systems are intermittent in flow and oxygenated, the biocide will adhere to pipe walls, reside in low points and pre-sumps, collect at the top of the skim piles all while undergoing oxidation and dilution. If sufficient water is routed to the system (e.g. a rain) then it will be diluted further before migration into the sea. Along the way, biocides will react with their intended target, bacterial growth, so only residual amounts of unreacted biocide may be discharged. For systems with skim piles, these piles typically reach well into the water column (20-90 feet is typical depending on water depth, with depths up to 200’ below sea level for facilities located in deeper water) and communicate with the sea primarily via wave and tide forces (versus intermittent bulk flow of water through the pile such as during rain events).</p> <p>The MMS (Feb 2001) developed profiles number 4, 5 and 6 (pgs. 163-182) for three biocides including evaluation of fate and effect in the marine environment. The information presented in the MMS report is extensive and so not repeated here. However, of note the report included evaluation of spills and available toxicological information and risk characterization. OOC notes that these spill models are representative (in fact conservative representations) of the intermittent discharges that could occur from periodic biocide treatments. The MMS evaluated spills of 500 gallons of 20-25% solutions of these biocides. The resultant risk was characterized as low (modeled concentrations were below toxicological effect levels). As noted above, biocide treatments of drains/sump systems are usually treated with 5-20 gallons at a time, therefore the risk associated with offshore treatment of drain/sumps systems would be reasonably even lower than MMS determined. The MMS further found that GLUT and THPS are not expected to</p>



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				<p>persist in the marine environment (chemical degradation rates were relatively rapid and both chemicals are biodegradable).</p> <p><u>THPS specific information:</u> (EPA 2011 and MMS 2001). At pH above 8 (basic conditions), THPS degrades within 7 days. The degradation products have been identified as trishydroxymethyl phosphine (THP) and subsequently trishydroxymethyl phosphine oxide (THPO). An open literature study also shows that THPS degrades in artificial seawater (ph 7.9) with a half-life of 6 days. MMS 2001 states that THPS degrades to the less toxic THPO with a half-life of about 6 hours. EPA's EPI Suite model indicates that THPS is easily biodegradable (fast biodegradability); ultimate biodegradability is fast as well. Primary biodegradation half-life is estimated at hours/days. Its estimated Log Kow varies from -4.42 to -20.39; it is not likely to bioaccumulate in aquatic organisms.</p> <p><u>Glutaraldehyde specific information:</u> (EPA 2007 and MMS 2001). When glutaraldehyde is introduced into the environment, it is most likely to remain in the aquatic compartment, given the small air/water partition and soil/water partition coefficients. Aquatic metabolism, under aerobic and anaerobic conditions, is a major route of dissipation of glutaraldehyde. Glutaraldehyde was more than 50% biodegraded in less than 5 days in a standard BOD (Biological Oxygen Demand) test. Glutaraldehyde meets the (Organization for Economic Cooperation and Development) OECD criteria for classification as readily biodegradable in freshwater environments and as having the potential to be biodegradable in marine environments. In addition, the metabolism of glutaraldehyde is rapid and proceeds via the formation of glutaric acid as an intermediate to complete mineralization. Because of its biodegradation, glutaraldehyde is not likely to contaminate surface and ground waters.</p> <p><b>Summary</b> – Biocides are necessary for the sump/drain systems to meet the proper operation and maintenance requirements (over and above other cleaning options) of BOEM regulations and the NPDES permit, prevent permit noncompliances, present minimal risk to the marine environment and are not practical for sampling.</p> <p><u>References</u></p> <p>MMS, 2001 Deepwater Program: Literature Review Environmental Risks of Chemical Products Used in Gulf of Mexico Deepwater Oil and Gas Operations</p> <p>EPA 2011, Tetrakis (Hydroxymethyl) Phosphonium Sulfate (THPS) Summary Document: Registration Review, Docket # EPA-HQ-OPP-2011-0067</p> <p>EPA 2007, Reregistration Eligibility Decision for Glutaraldehyde, EPA 739-R-07-006</p> <div><div> Attachment A.pdf</div><div> Attachment B.pdf</div></div>



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5.	Drilling Fluids - Monitoring	Part II.B.1.c.i	<p><del>“i. <u>Drilling Fluids Inventory</u>. The permittee shall maintain a precise chemical usage record of all constituents and their total volume and mass added for each well. Information on the identity, as listed on the applicable SDS, and concentration of each chemical constituent intentionally added to the drilling fluids. Information shall be recorded and retained for the term of the permit, except for Confidential Business Information which may be maintained securely offsite by the operator or relevant service provider.”</del></p>	<p><u>OOC requests</u> this change for consistency and alignment with Part I.A.4.u, Part I.B.6.a.iii, and Part II.C.5 of the permit.</p> <p>Also, consistent with the above-referenced comments, <u>OOC requests</u> that any requirements for disclosure of treatment, completion and workover fluid compositional information be clarified as to the extent of disclosure required. Proposed revision reflects a requirement for disclosure of composition as described on the SDS for relevant additives.</p> <p>Additionally, consistent with comments to Part I.A.4.u, <u>OOC requests</u> that the disclosure requirement be for composite chemical composition of all additives in the drilling fluids so as to conform to the system-style disclosure that has been adopted for use in many jurisdictions, including by the U.S. Department of Interior, and by FracFocus. System-style disclosure would satisfy the objectives of the permit revision while reducing the necessity for companies to make confidential business information claims on such disclosures. The process known as system-style disclosure lists all known chemical constituents in a fluid, but decouples those constituents from their parent additives, thus improving protection of the proprietary chemistry used in the application while promoting greater disclosure.</p>
6.	Monitoring Reports and Permit Modification	Part III.A	<p><b>Part III. Monitoring Reports and Permit Modification</b></p> <p><b>A. <u>Monitoring Reports</u></b></p> <p>The operator shall be responsible for submitting monitoring results for each permitted facility (e.g., well) within the lease block. If there is more than one type of wastewater for each well, the discharge outfalls shall be designated in the following manner:</p> <p>001 for Water-based Drilling Fluids 002 for Water-based Drill Cuttings 003 for Synthetic-based Drill Cuttings 004 for Produced Water 005 for Deck Drainage 006 for Well Treatment, Completion, and Workover Fluids <del>007 for Completion Fluids</del> <del>008 for Workover Fluids</del> <del>009</del> 007 for Sanitary Discharges <del>010</del> 008 for Domestic Waste Discharges <del>011</del> 009 for Miscellaneous Discharges <del>012</del> 010 for Miscellaneous Discharges in Which Chemicals Have Been Added <del>013</del> 011 for Status Updates for Required Studies and Plans <del>014</del> 012 Process water generated from the Monoethylene glycol reclamation process and discharged separately from produced water via outfall 004</p> <p>Monitoring results obtained for each 3-month period (i.e., quarter), starting with the first month of coverage under this permit, shall be summarized for that timeframe and reported on either a DMR form (EPA No. 3320-1) or optional EPA Region 4 approved form, and shall be postmarked no later than the 28th day of the second month following the completed quarterly period. For example, for coverage beginning on January 1, data for January 1 to March 31 shall be submitted by April May 28th. If the NetDMR tool is unavailable during the month when DMRs are due, the DMR will become</p>	<ol style="list-style-type: none"><li>1. <u>OOC is requesting</u> that Treatment, Completion, and Workover Fluids Outfalls be combined into a single outfall as it is under the current permit. There is no reason to separate these outfalls. TCW reporting requirements will provide detailed information on each discharge.</li><li>2. <u>OOC is requesting</u> an extension of the DMR reporting due date from the 28th day of the first month after the Quarter ends to the second month. Allowing OOC members more time to QA/QC the documents will ensure accurate information is reported to the EPA. The permit language already requires that notification to EPA be made within 24 hours for any noncompliance which may endanger health or the environment (Section D. Reporting Requirements). As per anti-backsliding, the OOC is not requesting a revision of technology based limitations, effluent limitations based on state treatment or changes to water quality standards, this request is based on reporting submittals.</li><li>3. <u>OOC also requests</u> that language be added to the permit addressing longer term issues (e.g. a Government Shutdown) where there is the possibly of a longer period of system unavailability (longer than a system refresh or update) and requests a grace period of 60 days from the date the system is back up and functioning.</li></ol>



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			due 60 days following the completed quarterly period. A further extension of 60 days can be granted by the EPA Region IV Enforcement Branch in the case where the system remains shutdown. If a failure of any permit limitation occurs, the permittee must report the incidents to the EPA Director, or their designated representative, orally within 24 hours and file a written report with the Director in accordance with the requirements in 40 C.F.R. Part 122.	
7.	Drilling Fluids - Limitations	Section I.B.1.b	<p>“...Analysis for cadmium shall be conducted using EPA methods 200.7, 200.8, or EPA method 3050 B followed by 6010B or 6020, or more recently approved methods and the results expressed as mg/kg (dry weight) of stock barite.</p> <p>Analyses for mercury shall be conducted using EPA Method 245.5, Method 7471 A, or more recently approved methods and the results expressed in mg/kg (dry weight) of stock barite.”</p>	<p>OOO is requesting this change for consistency and alignment with GMG290000 where new methods are approved during the permit term.</p> <p>Ref: Final permit decision and response to comments received on the draft reissued NPDES permit publicly noticed in the Federal Register on March 7, 2012. Date: September 28, 2012</p>
8.	Well Treatment, Completion and Workover Fluids – Priority Pollutants	Part I.B.6.a.iii	<p>“.....Information on the <del>specific chemical composition of any additives</del> identity, as listed on the applicable SDS, and concentration of each chemical constituent intentionally added to the well treatment, completion, or workover fluid currently being used and discharged in well treatment, completion or workover operations including fluids containing priority pollutants, shall be recorded and submitted as part of the NOI (see part I.A.4.u). Any updated information regarding chemical composition of new formulations that contain priority pollutants and that will be used and discharged shall be submitted to EPA Region 4 annually no later than September 30th. Operators may submit this information marked as “Confidential Business Information” or other suitable form of notice or may have service providers independently submit this information marked as such, if necessary. The information so marked shall be treated as information subject to a business confidentiality claim pursuant to 40 CFR Part 2. Except for Confidential Business Information which may be maintained securely offsite by the operator or relevant service provider, Copies of these records should also be kept on the rig while the rig is on the permitted location and thereafter at the permittee’s shore base or office no less than five years from the issuance date of the permit. Records can be scanned and saved electronically, and electronic records are acceptable for an inspector’s review. These record retention requirements supersede those found in Part II.C.5. of this permit.”</p>	<p><u>OOO requests</u> this change for consistency and alignment with Part I.A.4.u and Part II.C.5 of the permit.</p> <p>Also, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that any requirements for disclosure of treatment, completion and workover fluid compositional information be clarified as to the extent of disclosure required. Proposed revision reflects a requirement for disclosure of composition as described on the SDS for relevant additives.</p> <p>Additionally, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that the disclosure requirement allows for the use of a systems-style disclosure of the chemical composition of all additives in a fluid (or fluids, in the case of multiple disclosed applications) consistent with the approach that has been adopted for use in some jurisdictions and by FracFocus. System-style disclosure would satisfy the objectives of the permit revision while potentially reducing the necessity for companies to make confidential business information claims on such disclosures. The process known as system-style disclosure lists all known chemical constituents in a fluid, but decouples those constituents from their parent additives, thus improving protection of the proprietary chemistry used in the applications while promoting greater disclosure. At the same time, in order to protect the substantial investment of time and resources in developing proprietary products, it is critical that operators and service companies have the ability to protect proprietary information as Confidential Business Information even when using a systems-style approach.</p> <p>Also, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that service providers be permitted to disclose the trade secret/CBI information directly to EPA rather than requiring disclosure through the operators. Such independent disclosure is necessary in order to protect the substantial investment of time and resources that service providers make in developing proprietary products. Chemical additives play a critical role in the safety, efficiency and productivity of offshore wells, and access to newly-developed, ever-improving chemicals—be they “greener,” more efficient or more effective—is in turn critical to continued improvements in offshore operations.</p>
9.	Well Treatment, Completion and Workover Fluids – Monitoring	Part I.B.6.a.iv	<p>“iv. Chronic Whole Effluent Toxicity for Well Treatment, Completion or Workover fluids— <del>Permittees</del> Permittees with discharges of well treatment fluids, completion or workover lasting four or more consecutive days must monitor and report the No Observable Effect Concentration (NOEC) relative</p>	<p>1. <u>OOO requests</u> that these requirements be moved to Part I.B.6.b to provide additional clarity that these are not limitations The requirements shown under existing Part I.B.6.a.iv are monitoring only requirements. .</p>





Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
	Requirements – Industry Wide Study Alternative		<p>to the predicted effluent concentration at the edge of a 100-meter mixing zone. A grab sample must be taken at least once per month when discharging. Predicted effluent concentrations, referred to as critical dilutions, are presented in Tables 3 4 and 4 5 of Appendix B A for a range of discharge rates and pipe diameters.</p> <p>Permittees discharging well treatment wastewater at conditions other than those covered in Tables 3 4 and 4 5 of Appendix A (e.g., at a rate greater flows, pipe diameters, or discharge densities) shall determine the critical dilution using the appropriate CORMIX model with the input parameters shown below. Permittees shall retain the model runs as part of the NPDES records. The critical dilution shall be determined using the CORMIX model using the highest daily average discharge rate for the three days prior to the day in which the test sample is collected, the discharge pipe diameter, the measured or calculated discharge density, and the depth difference between the discharge pipe and the sea bottom.</p> <p>Input Parameters: Density Gradient = 0.163 kg/m<sup>3</sup>/m Ambient seawater density = 1023.0 kg/m<sup>3</sup> <del>Well Treatment wastewater density = 1030.0 – 1680.0 kg/m<sup>3</sup></del> <del>Completion and workover fluids = 1030.0 – 1680.0 kg/m<sup>3</sup></del> Current speed = 5 cm/sec (&lt;200 m water depth); 15 cm/sec (&gt;200 m water depth)</p> <p>The NOEC shall be calculated by conducting 7-day chronic toxicity tests in accordance with methods published in <i>Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms</i> (EPA/821-R-02-014), or most current edition.</p> <p>The results for both species shall be reported on the DMR. See Part V.A.15.b of this permit for Whole Effluent Toxicity Testing Requirements. Samples must be taken at the nearest accessible location prior to discharge. All modeling runs shall be retained by the permittee as part of its NPDES records.”</p>	<p>2. <u>OOO requests</u> EPA verify the meaning of the language “lasting four or more consecutive days”. A plain reading indicates this means a discharge to the ocean that is continuous over 24 hours per day and over four or more days. Our members however felt there was room for different interpretations and so want to be sure of EPA’s intent is the above plain reading.</p> <p>3. To clarify sample frequency, <u>OOO requests</u> EPA adopt a frequency of monthly. Mandating a sampling frequency of monthly ensures toxicity testing is completed at various stages throughout the well job (and is identical to monthly oil and grease sampling frequency).</p> <p>4. <u>OOO requests</u> the noted Table reference corrections be incorporated into the permit.</p> <p>5. <u>OOO requests</u> adding “or calculated” to allow operators the flexibility to calculate discharge densities based on the average of all the fluids planned to be discharged. Discharge densities can vary throughout the discharge. Being able to calculate a discharge density will allow operators to run CORMIX prior to the discharge to calculate the critical dilution factor. This will allow operators to identify the size of sample containers needed to obtain the appropriate volume of sample needed to run the toxicity test.</p> <p>6. <u>OOO requests</u> removing the density ranges for well treatment, completion, and workover fluids as the proposed ranges may not cover the full range of densities of these types of fluids used. As EPA stipulates that the operator must use the discharge density, the range is not necessary and could unduly limit the operator.</p> <p>7. <u>OOO requests</u> EPA consider requiring acute toxicity testing in lieu of chronic toxicity testing. An acute toxicity test based on an appropriate acute to chronic ratio is considered an equivalent test to a chronic toxicity test. A ten to one acute to chronic ratio is the normal ratio for most industrial effluents and has been used in other NPDES permits where the effluent is highly diluted in the receiving stream and an acute test is required in place of a chronic test. In addition, the acute test is less burdensome to permittees because it is less costly than a chronic test and because the acute test will be run on less dilute effluent there is less chance for laboratory error. Consistently requiring a monthly acute toxicity test, regardless of well job duration, will simplify sample planning and eliminate the need to pull an additional sample in well jobs that exceed four days duration unexpectedly.</p>
10.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements – Industry Wide Study Alternative	Part I.B.6.a.v	“(v). Acute Whole Effluent Toxicity Testing for Well Treatment, Completion or Workover Fluids -The following Acute Whole Effluent Testing requirements apply to discharges of well treatment fluids that last less than 4 days. A grab sample must be taken at least once per month when discharging. Permittees must monitor and report the acute critical dilution (ACD) at the edge of a 100 meter mixing zone. The ACD is defined as 1.0 times the LC <sub>50</sub> . The ACD and the predicted effluent concentration at the edge of a 100 meter mixing zone must be reported on the DMR. Predicted effluent concentrations, referred to as “critical dilutions,” are presented in Tables 3 4	<p>1. <u>OOO requests</u> that these requirements be moved to Part I.B.6.b to provide additional clarity that these are not limitations. The requirements under Part I.B.6.a.v are monitoring only requirements.</p> <p>2. <u>OOO requests</u> EPA add clarifying text as shown for the less than four day toxicity test trigger. Often, a specific well job will last many days, and be sprinkled with short duration low volume discharges at various times through-out the job. Sampling every small, discrete discharge would be an excessive burden on offshore Operators logistically. To balance this- similar to OOC’s recommendation for &gt;4 day discharges- OOC requests mandating a sampling frequency of monthly. This ensures acute toxicity testing is completed at various stages through-out the job (identical to monthly oil and grease sampling frequency).</p>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p>and 4 5 of Appendix A for a range of discharge rates and pipe diameters. Critical dilution shall be determined using Tables 3 4 and 4 5 of this permit based on the most recent discharge rate, discharge pipe diameter, and water depth between the discharge pipe and the ocean bottom. LC<sub>50</sub> shall be calculated by conducting 48-hour, non static renewal, toxicity tests once per discharge using <i>Mysidopsis bahia</i> and <i>Menidia beryllina</i> (Inland silverside minnow). Additional acute toxicity testing requirements are contained in Part V.A.15.c of this permit.</p> <p>Permittees discharging well treatment wastewater at conditions other than those covered in Tables 3 4 and 4 5 of Appendix A (e.g., at a rate greater flows, pipe diameters, or discharge densities) shall determine the critical dilution using the appropriate CORMIX model with the input parameters shown below. Permittees shall retain the model runs as part of the NPDES records. The critical dilution shall be determined using the CORMIX model using the highest daily average discharge rate for the three days prior to the day in which the test sample is collected, the discharge pipe diameter, the measured or calculated discharge density, and the depth difference between the discharge pipe and the sea bottom.</p> <p>Input Parameters:</p> <p>Density Gradient = 0.163 kg/m<sup>3</sup>/m</p> <p>Ambient seawater density = 1023.0 kg/m<sup>3</sup></p> <p><del>Well Treatment wastewater density = 1030.0 – 1680.0 kg/m<sup>3</sup></del></p> <p><del>Completion and workover fluids = 1030.0 – 1680.0 kg/m<sup>3</sup></del></p> <p>Current speed = 5 cm/sec (&lt;200 m water depth); 15 cm/sec (&gt;200 m water depth) Permittees shall retain the model runs as part of the NPDES records.</p> <p>Samples for the acute WET tests shall be obtained at the nearest accessible point after final treatment and prior to discharge to surface waters.”</p>	<p>3. <u>OOO requests</u> the noted Table reference corrections be incorporated into the permit.</p> <p>4. <u>OOO requests</u> adding “or calculated” to allow operators the flexibility to calculate discharge densities based on the average of all the fluids planned to be discharged. Discharge densities can vary throughout the discharge. See additional rationale above.</p> <p>5. <u>OOO requests</u> removing the density ranges for well treatment, completion, and workover fluids as the proposed ranges may not cover the full range of densities of these types of fluids used. As EPA stipulates that the operator must use the discharge density, the range is not necessary and could unduly limit the operator.</p>
11.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements – Industry Wide Study Alternative	Part I.B.6.b	<p><u>“Well Treatment Completion and Workover Reporting Requirements.</u></p> <p>Operators of leases where well treatment, completion, or workover fluids are discharged shall collect and report the information listed below. This information shall be reported with the discharged monitoring report for the quarter in which the discharge is made. If discharges commence in one</p>	<p><u>OOO requests</u> updating the references for “additional toxicity testing requirements” to be consistent with proposed changes.</p> <p>Also, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that any requirements for disclosure of treatment, completion and workover fluid compositional information be clarified as to the extent of disclosure required. Proposed revision reflects a requirement for disclosure of composition as described on the SDS for relevant additives.</p>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p>quarter and cease in the following quarter, reporting should be done in the later quarter.</p> <p>For each well in which operations are conducted that result in the discharge of well treatment, completion, or workover fluids the following shall be reported with the discharge monitoring report for the quarter in which the activity is done:</p> <ul style="list-style-type: none"><li>• Lease and block number</li><li>• API well number</li><li>• Type of well treatment or workover operation conducted</li><li>• Date of discharge</li><li>• Time discharge commenced</li><li>• Duration of discharge</li><li>• Volume of well treatment</li><li>• Volume of completion or workover fluids used</li><li>• The identity, as listed on the applicable SDS, and concentration of each chemical constituent intentionally added to the well treatment, completion, or workover fluid used</li><li><del>• The volume of each additive</del></li><li><del>• Concentration of all additives in the well treatment</del></li><li><del>• Concentration of all additives in the completion, or workover fluid</del></li><li>• Results of Whole Effluent Toxicity (WET) tests for well treatment fluids discharged separately from the produced water discharge. Additional toxicity testing requirements are contained in Part V.A.15.b and Part V.A.15.c of this permit.</li></ul> <p>Information collected for this reporting requirement shall be submitted as an attachment to the DMR or in an alternative format requested by the operator and approved by EPA Region 4. Operators may submit this information marked as “Confidential Business Information” or other suitable form of notice or may have service providers independently submit this information marked as such, if necessary. The information so marked shall be treated as</p>	<p>Additionally, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that the disclosure requirement allow for the use of a systems-style disclosure of the chemical composition of all additives in a fluid (or fluids, in the case of multiple disclosed applications) consistent with the approach that has been adopted for use in some jurisdictions and by FracFocus. System-style disclosure would satisfy the objectives of the permit revision while potentially reducing the necessity for companies to make confidential business information claims on such disclosures. The process known as system-style disclosure lists all known chemical constituents in a fluid (or fluids, in the case of multiple disclosed applications), but decouples those constituents from their parent additives, thus improving protection of the proprietary chemistry used in the applications while promoting greater disclosure. At the same time, in order to protect the substantial investment of time and resources in developing proprietary products, it is critical that operators and service companies have the ability to protect proprietary information as Confidential Business Information even when using a systems-style approach.</p> <p>Also, consistent with comments to Part I.A.4.u, <u>OOO requests</u> that service providers be permitted to disclose the trade secret/CBI information directly to EPA rather than requiring disclosure through the operators. Such independent disclosure is necessary in order to protect the substantial investment of time and resources that service providers make in developing proprietary products. Chemical additives play a critical role in the safety, efficiency and productivity of offshore wells, and access to newly-developed, ever-improving chemicals—be they “greener,” more efficient or more effective—is in turn critical to continued improvements in offshore operations.</p> <p>Without these changes, this proposed requirement creates challenges for companies that may manufacture products which contain proprietary components or trade secrets. Companies with trade secrets could experience significant negative economic impacts if a proprietary additive was “reverse engineered” based on information submitted to EPA as part of this requirement.</p> <p>The Occupational Safety and Health Administration (OSHA) has addressed similar challenges in its Hazard Communication requirements. Specifically, OSHA has provided criteria that allow manufacturers to deem a chemical component as a “trade secret” on a Safety Data Sheet (SDS) (see 29 CFR 1910.1200(i)). Under the OSHA Hazard Communication requirements, a proprietary chemical component that has been designated as a trade secret is listed on the SDS in a generic manner, such as “Proprietary Component A.”</p> <p>Given the above, <u>OOO is requesting</u> that EPA Region 4 incorporate the OSHA Hazard Communication trade secret criteria by reference in the proposed GEG460000 permit.</p> <p>Under this proposed change, EPA Region 4 would still have access to information that priority pollutants are present or not in a particular additive, and the proprietary nature of certain additives would be protected. This added language would also bring the two regulatory programs into alignment, making compliance straightforward and consistent. If a specific identity of a chemical compound can be obscured on an SDS while still communicating sufficient information to ensure the safe handling, use and disposal of the chemical compound, then it is reasonable to allow it to be withheld from the reporting of fluid discharges wherein the chemical compound is greatly diluted.</p> <p>This approach aligns with the disclosure of hydraulic fracturing chemicals used in the onshore oil and gas industry. The FracFocus Chemical Disclosure Registry (www.fracfocus.org) allows chemicals in the registry to be designated as proprietary if the chemical has been determined to meet the OSHA trade secret criteria.</p>





Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			information subject to a business confidentiality claim pursuant to 40 CFR Part 2.	
12.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements – Industry Wide Study Alternative	Part I.B.6.b	<p><u>“Industry-Wide Study Alternative</u></p> <p>Alternatively, operators who discharge well treatment, completion, and/or workover fluids may participate in an EPA-approved industry-wide study as an alternative to conducting monitoring of the fluids characteristic and reporting information on the associated operations. That study would, at a minimum, provide a characterization of well treatment, completion, and workover fluids used in a representative number of <del>active wells discharging well treatment, completion, and/or workover fluids of varying depths (shallow, medium depth and deep depths)</del> wells discharging well treatment, completion, and/or workover fluids of varying depths (shallow, medium depth and deep depths). In addition, an approved industry-wide study would be expected to provide greater detail on the characteristics of the resulting discharges, including their chemical composition and the variability of the chemical composition and toxicity. The study area should include a statistical valid number of samples of wells located in the Eastern Gulf of Mexico (GOM) and may include the Western and Central Areas of the GOM under the permitting jurisdiction of EPA Region 6, and operators may join the study after the start of and completion of the study date. The study plan should also include interim dates/milestones.</p> <p>A plan for an industry- wide study would be required to be submitted to EPA Region 4 for approval within six months after the effective date of this permit. Once a permittee has committed financially to participate in the approved study it shall constitute compliance with the monitoring and reporting requirements of Part I.B.6.b. If the Region does not approve the study plan or a permittee does not sign up to participate in the study, compliance with all the monitoring and reporting requirements for well treatment, completion and workover fluids is required. <del>If the Region approves an equivalent industry-wide well treatment fluids discharge monitoring study, the monitoring conducted under that study shall constitute compliance with these monitoring requirements for permittees who participate in such the industry-wide study.</del> Once approved, the study plan will become an enforceable part of this permit. The study must commence within six months of EPA’s approval. <del>If the Region does not approve the study plan or if a permittee does not participate in the study, compliance with all the monitoring requirements for well, completion, and workover fluids is required (see above).</del> The final study report must be submitted no later than three years from the effective date of this permit.”</p>	<ol style="list-style-type: none"> <li>1. <u>OOO is requesting</u> that “active” be struck. It is unclear what is intended by “active”, and could, for instance, unintentionally exclude well jobs associated with initial completion and with abandonment. It is enough to simply reference well jobs where TCW fluids will be discharged.</li> <li>2. <u>OOO requests</u> striking “of varying depths (shallow, medium depth and deep depths)” and replacing simply with “discharging well treatment, completion, and/or workover fluids fluids” .</li> </ol> <p>The number of wells discharging TCW fluids in Region IV by members of OOC is small, due to few wells in, and limited development plans for, the Region. Even using wells from Region VI, to ensure adequate numbers of samples, all wells would probably have to be sampled as the jobs arise to ensure compliance with the three year study window. In other words, the Study Operators wouldn’t have the luxury per se of picking and choosing well discharges to sample.* Therefore, specifying varying depths overly constrains the study from the start. Additionally, it’s unclear what EPA means by this term (is it water depth, well depth to reservoir, discharge depth?)</p> <p>* This is the same approach EPA approved for the recent WBM dissolved metals study i.e sampling the WBM as each drilling job came along.</p> <ol style="list-style-type: none"> <li>3. <u>OOO is requesting</u> changes to the permit language to clarify that a financial commitment to participate in the Industry-Wide Study Alternative satisfies the chronic and acute monitoring requirements and the Well Treatment, Completion, and Workover Reporting Requirements of the permit, and ensure consistency with prior approved industry studies. Further, the change allows the option for new permittees to benefit from the industry-wide study after initiation and completion of the study.</li> </ol>
13.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements –	Part V.A.15.a	<p>(a) The following Chronic Whole Effluent Toxicity testing requirements apply to: 1) Produced Water Discharges; <del>2) Well Treatment, Well Completion or Well Workover Fluid Discharges lasting four or more days;</del> 2) Miscellaneous Discharges of Seawater and Freshwater to which chemicals have been added; and 3) Chemicals used in subsea operations, including but not limited to, Subsea Wellhead Preservation Fluids, Subsea Production</p>	<p>There are some requirements in this section that are not relevant to Well Treatment, Well Completion, or Well Workover Fluid Discharges lasting four or more days. <u>OOO recommends</u> removing Well Treatment, Well Completion, or Well Workover Fluid Discharges lasting four or more days from this section of the permit and adding a section specific to this type of discharge to ensure clarity, as presented in this table (the next line item below).</p>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
	Industry Wide Study Alternative		Control fluids, Umbilical Steel Tube Storage Fluid, Leak Tracer Fluids and Riser Tensioner Fluids.	
14.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements – Industry Wide Study Alternative	Part V.A.15.b (New Section)	<p>(b) The following Chronic Whole Effluent Toxicity testing requirements apply to Well Treatment, Well Completion or Well Workover Fluid Discharges lasting four or more days.</p> <p>The control and dilution water will be natural or synthetic seawater at 25 ppt salinity as described in EPA-821-R-02-014, Section 7, or the most current edition. A standard reference toxicant quality assurance chronic toxicity test shall be conducted concurrently with each species used in the toxicity tests and the results included in summary laboratory report, which is to be submitted with the DMR. Alternatively, if monthly QA/QC reference toxicant tests are conducted, these results must be included in the summary laboratory report. The permittee shall submit a full laboratory report upon specific request of EPA or as agreed to in the study. Any deviation from the bioassay procedures outlined or cited herein shall be submitted in writing to the EPA for review and approval prior to use.</p> <p>i. The permittee shall conduct a mysid, <i>Mysidopsis bahia</i>, Survival and Reproduction test and an Inland silverside minnow, <i>Menida beryllina</i>, Larval Survival and Growth test. All tests shall be conducted using a control (0% effluent) and the following dilution concentrations: 0.25 times the critical dilution (CD), 0.5 times the CD, the CD, two times the CD and, four times the CD. The measured endpoints will be the survival and growth No Observed Effect Concentration (NOEC) concentration for each species. The survival and growth responses will be determined based on the number of <i>Mysidopsis bahia</i> or <i>Menida beryllina</i> larvae used to initiate the test.</p> <p>ii. For each set of tests conducted, a grab sample of final effluent shall be collected and used to initiate the test within 36 hours of collection.</p> <p>iii. If control mortality exceeds 20% in any test, the test(s) with that species (including the control) shall be repeated if an additional sample can be obtained. For either species, a test will be considered valid only if control mortality does not exceed 20%. Each test must meet the test acceptability criteria for each species as defined in EPA-821-R-02-014, Section 13.12 for <i>Menida beryllina</i> and Section 14.12 for <i>Mysidopsis bahia</i>, or the most current edition. Additionally, all test results must be evaluated and reported for concentration-response relationship based on “Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 C.F.R. Part 136),” EPA/821/B-00/004 (<a href="http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_disk2_atx.pdf">http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_disk2_atx.pdf</a>), or the most current edition. If the required concentration-response review fails to yield a valid relationship per EPA/821/B-00/004 (or the most current edition), that test shall be repeated if an additional sample can be obtained. Any test initiated but terminated prior to completion must be reported with a complete explanation for the termination. If the conditions of test acceptability are met as described above</p>	<p>As stated above, there are some requirements in Part V.A.15.a that are not applicable to the “monitoring only” requirements for Well Treatment, Well Completion or Well Workover Fluid Discharges lasting four or more days. OOC is proposing the addition of this new section to only capture the requirements from Part V.A.15.a applicable to “monitoring only”. OOC has removed all language regarding permit violations. OOC is proposing to strike the DMR language requiring reporting pass/fail due to this being a monitoring only requirement.</p> <p>OOC has also added clarifying language to indicate that repeat samples for invalid test results are only required if the discharge is still occurring and the additional sample can be obtained.</p> <p><u>Finally OOC requests</u> n not including a frequency for testing in this section. The frequency for testing has been addressed above under our comments for I.B.6 for well fluids. Additionally, the V.A.15a.ii “standard” frequency requirements, if left in the permit, would conflict with Part I.B.6 the former were written for PW and other routine discharges- to apply a recurring test frequency, and associated reduction criteria to “monitor only”, short term, well specific fluid discharges is extremely confusing. The frequencies for this testing are adequately specified at I.B.6 (with OOC comments noted for that section above).</p>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p>and in Part V.15.4, and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the permittee shall report a survival NOEC of not less than the critical dilution in the DMR.</p> <p>The summary laboratory reports shall include, as a minimum, the following information:</p> <ul style="list-style-type: none"><li>(1) Permittee's Name</li><li>(2) Name of test and test method number</li><li>(3) Name of test species</li><li>(4) Outfall identification designation and type of wastewater</li><li>(5) Name of biomonitoring laboratory</li><li>(6) Date sample was collected</li><li>(7) Date and time test initiated</li><li>(8) Critical Dilution</li><li>(9) Indicate if test is "valid." If not, state reasons why.</li><li>(10) For each species, the percent effluent corresponding to each NOEC for both the growth test and the survival test.</li></ul> <p>v. An NOEC of less than CD % effluent in any valid routine or additional definitive Survival or Growth test for either species will not be a violation of this permit.</p> <p>vi. This permit may be reopened to require chemical specific effluent limits, additional testing and/or other appropriate actions to address toxicity.</p>	
15.	Well Treatment, Completion and Workover Fluids – Monitoring Requirements – Industry Wide Study Alternative	Part V.A.15.b	<p>(b) The following Acute Whole Effluent Toxicity testing requirements apply to Well Treatment, Well Completion or Well Workover Fluid Discharges lasting less than four consecutive days.</p> <p>Acute toxicity shall be used to determine the concentration of effluent that results in mortality of the test organisms during a 48-hour exposure. The control and dilution water will be natural or synthetic seawater at 25 parts per thousand salinity as described in EPA's acute WET test methods (2002), "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (<i>hereafter EPA's acute test methods</i>), Section 7, (<a href="http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_disk2_atx.pdf">http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_disk2_atx.pdf</a>) or the most current edition. A standard reference toxicant quality assurance acute toxicity test shall be conducted concurrently with each species used in the toxicity tests and the results included in summary laboratory report, which is to be submitted with the discharge monitoring report (DMR). Alternatively, if monthly quality assurance/quality control (QA/QC) reference toxicant tests are conducted, these results must be included in the summary laboratory report. The permittee shall submit a full laboratory report in the event a failure occurs (WET test demonstrates toxicity that would result in an exceedance of a NPDES WET compliance level for any test, or upon specific request of EPA</p>	<p><u>OOO is requesting</u> to renumber this section and make changes to only capture the requirements applicable to "monitoring only". OOO has removed all language regarding permit violations. OOO is proposing to strike the DMR language requiring reporting pass/fail due to this being a monitoring only requirement.</p> <p>OOO has also added clarifying language to indicate that repeat samples for invalid test results are only required if the discharge is still occurring and the additional sample can be obtained due to the short duration of the discharge.</p> <p><u>Finally OOO requests</u> removing the language at V.A.15.b.ii as applied to TCW fluids. The frequency for testing has been addressed above under our comments for I.B.6 for well fluids. Additionally, the V.A.15.b.ii "standard" frequency requirements, if left in the permit, would conflict with Part I.B.6- to apply a recurring test frequency, and associated reduction criteria to "monitor only", short term, well specific fluid discharges is extremely confusing. The frequencies for this testing are adequately specified at I.B.6 (with OOO comments noted for that section above).</p>




Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p>or as agreed to in the study. Any deviation from the EPA promulgated WET test methods (40 CFR Part 136) outlined or cited herein shall be submitted in writing to the EPA for review and approval prior to use.</p> <p>(i). The permittee shall conduct a mysid, <i>Mysidopsis bahia</i>, Lethality test and an Inland silverside minnow, <i>Menida beryllina</i>, Lethality test, for the duration of a discharge of well treatment, well completion, or well workover fluids, based on an effluent grab sample. All tests shall be conducted using a control (0% effluent) and the following dilution concentrations: 0.25 times the critical dilution (CD), 0.5 times the CD, the CD, two times the CD and, four times the CD. The measured endpoints will be the survival and growth Lethal Concentration for 50% of the test organisms (LC<sub>50</sub>) for each species. The endpoints will be determined based on a comparison of <i>Mysidopsis bahia</i> or <i>Menida beryllina</i> responses in the control (0% effluent) and in each of the five dilutions.</p> <p>For each set of tests conducted, a grab sample of final effluent shall be collected and used to initiate the test within 36 hours of collection.</p> <p>If control mortality exceeds 10% in any test, the test(s) with that species (including the control) shall be repeated if an additional sample can be obtained. For either species, a test will be considered valid only if control mortality does not exceed 10%. Each WET test must meet the required EPA WET test method's Test Acceptability Criteria (TAC) for each species as defined in the EPA's acute WET test method, (2002) EPA-821-R-02-012, Section 9, or the most current edition. Additionally, all WET test results must be evaluated and reported for concentration-response relationship based on EPA's (2000) "Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 C.F.R. Part 136)," EPA/821/B-00/004, (<a href="http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_wetguide.pdf">http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_wetguide.pdf</a>) or the most current edition. If the recommended concentration-response review produces an inconsistent dose-response curve per EPA/821/B-00/004 (or the most current edition), the test is not considered an invalid test but should be repeated if an additional sample can be obtained. Any WET test initiated but terminated prior to completion must be reported with a complete explanation for the termination. If the requirements of EPA's WET test method's TAC are met as described above and in Part V.15(b).4, and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the survival test shall be considered to be passing and the permittee shall report a LC<sub>50</sub> greater than the critical dilution in the DMR.</p> <p><del>(ii) The permittee may reduce monitoring frequency to once per discharge for the duration of the permit for Well Treatment, Completion or Workover fluid discharges after two consecutive valid tests. These tests are referred to as "routine" tests.</del></p>	



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p>Results from routine WET tests shall be reported according to EPA's acute WET test methods (2002), EPA-821-R-02-012, Section 12, or the most current edition. <del>All results shall also be recorded and submitted on the DMR in the following manner: If the LC<sub>50</sub> of a test species is less than or equal to the CD% effluent, and enter "1" shall be entered on the DMR for that species. If the LC<sub>50</sub> of a test species is greater than the CD% effluent, and "0" shall be entered on the DMR.</del></p> <p>The summary laboratory reports shall include, as a minimum, the following information:</p> <ol style="list-style-type: none"><li>(1) Permittee's Name</li><li>(2) Name of WET test and EPA WET test method number</li><li>(3) Name of WET test species</li><li>(4) Outfall identification designation and type of wastewater</li><li>(5) Name of biomonitoring laboratory</li><li>(6) Date sample was collected</li><li>(7) Date and time test initiated</li><li>(8) Critical Dilution</li><li>(9) Indicate if test is "valid." If not, state reasons why (i.e., what EPA WET test methods TAC not met).</li><li>(10) For each species, the percent effluent corresponding to each LC<sub>50</sub> for both the growth test and the survival test.</li></ol> <p>(iii) An LC<sub>50</sub> of less than or equal to the CD % effluent in any valid routine or additional definitive Survival or Growth WET test for either species will not be a violation of this permit.</p> <p><del>If an LC<sub>50</sub> of less than CD % effluent is found in a routine WET test, the permittee shall conduct two valid additional WET tests on each species indicating the violation and report each LC<sub>50</sub> obtained. A valid additional definitive WET test result cannot be used to negate a permit violation based on failure of a routine WET test.</del></p> <p><del>The first valid additional WET test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 0.0625 times the CD, 0.125 times the CD, 0.25 times the CD, 0.5 times the CD and the CD. The dilution series may be modified in the second valid WET test to more accurately identify the toxicity endpoints.</del></p> <p><del>For each additional WET test, the sample collection requirements and the required EPA WET test method's TAC must be met and the recommended concentration-response relationships (i.e., dose response curve) specified in sections 1.b. and c. above, respectively, must be met for the additional WET test to be considered valid. The first additional WET test shall begin within one day of the end of the routine WET test failure, and shall be conducted every other day thereafter until two consecutive additional passing WET tests are completed.</del></p>	



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			<p><del>Results from additional WET tests, required due to an acute toxicity violation in a routine WET test, shall be submitted in a single report prepared according to EPA's acute WET test methods (2002), EPA 821-R-02-012, Section 12, or the most current edition and submitted within 30 days of completion of the second valid additional test.</del></p> <p><del>After compliance is demonstrated for the two consecutive additional WET tests, the permittee may return to the testing frequency prior to the non-compliance.</del></p> <p>(iv) This permit may be reopened to require chemical specific effluent limits, additional WET testing and/or other appropriate actions to address toxicity.</p>	
16.	Cooling Water Intake Structure	Part I.D.3.a Baseline Study Requirements	<p><b>a. Baseline Study Requirements</b></p> <p>These baseline study requirements are effective one year after the effective date of this permit. Operators of new facilities must submit sufficient information to characterize the biological community of commercial, recreational, and forage base fish and shellfish in the vicinity of the intake structure and to characterize the effects of the cooling water intake structure's operation on aquatic life. This biological characterization must include any available existing information along with field studies to obtain localized data. At a minimum, the information must include:</p> <ul style="list-style-type: none"><li>i. A list of the data required by this section that are not available and efforts made to identify sources of the data;</li><li>ii. A list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of the cooling water intake structure;</li><li>iii. Identification of the species and life stages that would be most susceptible to impingement and entrainment. Species evaluated should include the forage base as well as those most important in terms of significance to commercial and recreational fisheries;</li><li>iv. Identification and evaluation of the primary period of reproduction, larval recruitment, and period of peak abundance for relevant taxa;</li><li>v. Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure;</li><li>vi. Identification of all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at the cooling water intake structures;</li><li>vii. If the information above is supplemented with data from field studies, the supplemental data must include a description of all methods and quality assurance procedures for sampling and data analysis including a description of the study area; taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods. The sampling and/or data analysis methods you use must be appropriate for a quantitative survey and based on consideration of methods used in other biological studies performed within the same source water body. The study area should include, at a minimum, the area of influence of the cooling water intake structure.</li></ul>	<p><u>OOC requests</u> that the baseline study requirements be removed from the permit for operators that participate(d) in the 2012 industry-wide Source Water Biological Baseline Characterization Study (SWBBCS). This study was approved by US EPA Region IV on 2/27/12 ( email documentation provided below and as Attachment C).</p> <div><p>SWBC Study Email.pdf</p></div>





Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
			Alternative to the baseline study requirements, operators may participate in the industry-wide Source Water Biological Baseline Characterization Study (SWBBCS) completed in 2012. Operators may opt to participate in the industry-wide study at any time.	
17.	Cooling Water Intake Structure	Part I.D.3.d.i-New non-Fixed Facilities	i. The operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual inspections at least <del>weekly</del> monthly, or at a lesser frequency as approved by the Director, to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Alternatively, the operator must inspect using remote monitoring devices to ensure that the impingement and entrainment technologies are functioning as designed.	OOO requests that visual inspections be required monthly. This request is backed by visual inspection data obtained in EPA Region VI. The observed rate of growth of biological material does not result in significant change over a one week period. Changes are hard to discern over a monthly period. For a deepwater facility(does not employ a sea chest) that performed entrainment monitoring under the EPA Region VI NPDES permit, the 2015 average monthly rate of growth expressed as % screen coverage was 2.5% with a monthly range of 0-6% growth.
18.	Cooling Water Intake Structure	Part I.D.3.d.i-New Fixed Facilities that do not employ sea chests as intake structures	i. The operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual inspections at least <del>weekly</del> monthly, or at a lesser frequency as approved by the Director, to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Alternatively, the operator must inspect using remote monitoring devices to ensure that the impingement and entrainment technologies are functioning as designed.	OOO requests that visual inspections be required monthly. This request is backed by visual inspection data obtained in EPA Region VI. The observed rate of growth of biological material does not result in significant change over a one week period. Changes are hard to discern over a monthly period. For a deepwater facility( does not employ a sea chest) that performed entrainment monitoring under the EPA Region VI NPDES permit, the 2015 average monthly rate of growth expressed as % screen coverage was 2.5% with a monthly range of 0-6% growth.
19.	Cooling Water Intake Structure	Part I.D.3.d.ii-New Fixed Facilities that do not employ sea chests as intake structures	ii. The operator must monitor for entrainment. The operator must collect samples to monitor entrainment rates (simple enumeration) for each species over a 24-hour period and no less than biweekly during the primary period of reproduction, larval recruitment, and peak abundance identified during the Source Water Baseline Biological Characterization Study. Representative species may be utilized for this monitoring consistent with their use in the Source Water Baseline Characterization Study. The operator must collect samples only when the cooling water intake structure is in operation. Alternative to the 2 year entrainment monitoring requirements, operators may participate in the industry-wide entrainment monitoring requirements completed in 2014. Operators may opt to participate in the industry-wide study at any time.  After 24 months of monitoring, <u>no further monitoring is required.</u>  Or alternate proposed language-  <u>After 24 months of monitoring the permittee may submit SEAMAP data annually to meet the requirements of 40CFR125.137. This report may be done in conjunction with other Operators subject to these requirements.</u>	<u>OOO strongly objects</u> to the continued requirement to conduct ongoing entrainment monitoring (after initial two year biweekly sampling). <u>OOO requests</u> that the requirements for entrainment monitoring be removed from the permit for operators that participate(d) in the 2014 entrainment monitoring study. This request is further supported by EPA’s own finding in the permit’s Environmental Assessment, specifically, per section 6.2 of the Draft EA: “ <i>EPA Region 4 has determined the study fulfills the requirements of the 2010 General Permit and demonstrated that cooling water intake structures on offshore oil and gas facilities have no significant impact on the selected species investigated.</i> ” As the species studied were reliable indicators for overall entrainment, and given no species of concern were caught within the 60,376 individuals identified from 1,515 tows spread throughout the 24 month sampling period, the Agency has no basis to continue to require costly on platform monitoring at affected facilities. OOO is therefore petitioning the EPA per their proposed language to reduce monitoring frequency to “none required”. Summarizing and amplifying information previously submitted, OOO suggests that Region IV accept the results of the 24 month entrainment monitoring study completed for Region VI as meeting, for the participating companies, the corresponding Region IV requirement.  As alternative to ongoing monitoring at affected facilities, <u>OOO suggests</u> using the SEAMAP database to establish the seasonality of entrainment potential, as required by 40CFR125.137. Using the SEAMAP database for entrainment risk assessment is actually preferable to platform specific monitoring because: <ul style="list-style-type: none"> <li>• Data are collected and maintained over the long term, using consistent methodology for all sites, ensuring comparability of data over time</li> <li>• The existing SEAMAP database already provides an assessment of seasonality of entrainment risk (as required by 40CFR125.137) which can be periodically updated as new data are added to detect changes in risk over time.</li> </ul>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
				<ul style="list-style-type: none"><li>SEAMAP larval data could be selected for most common species in each region</li><li>Approach is cost effective and appropriate to the low level of risk demonstrated in the 24-month Entrainment Monitoring Study and in a peer-reviewed study of entrainment risk from much larger water volumes in depths of 20-60 m where egg and larval densities are much higher.*</li></ul> <p>*Gallaway, B.J., W.J. Gazey, J.G. Cole, and R.G. Fechhelm (2007); "Estimation of Potential Impacts from Offshore Liquefied Natural Gas Terminals On Red Snapper and Red Drum Fisheries of the Gulf of Mexico: An Alternative Approach" Transactions of the American Fisheries Society (2007) 136:655-677</p> <p>Given this finding, use of existing SEAMAP system for monitoring entrainment is a much more comprehensive, cost-effective mechanism for gauging the seasonality of entrainment potential over time. Such SEAMAP reporting could be done by the Agency's review of this data set or by a permit requirement for industry to submit annual reports on the SEAMAP data.</p>
20.	Cooling Water Intake Structure	Part I.D.3.d.i-New Fixed Facilities that Employ Sea Chests as Intake Structures	i. The operator must conduct either visual inspections or use remote monitoring devices (e.g., remotely operated vehicles (ROV), subsea cameras, or other monitoring device) during the period the cooling water intake structure is in operation. The operator must conduct visual inspections at least <del>weekly</del> monthly, or at a lesser frequency as approved by the Director, to ensure that the required design and construction technologies are maintained and operated so they continue to function as designed. Alternatively, the operator must inspect using remote monitoring devices to ensure that the impingement and entrainment technologies are functioning as designed.	<u>OOC requests</u> that visual inspections be required monthly. This request is backed by visual inspection data obtained in EPA Region VI. The observed rate of growth of biological material does not result in significant change over a one week period. Changes are hard to discern over a monthly period. For a deepwater facility(does not employ a sea chest) monitored under the EPA Region VI NPDES permit, the 2015 average rate of growth expressed as % screen coverage was 2.5% with a monthly range of 0-6% growth.
21.	CORMIX Tables	Appendix A and Table of Contents	<p>The TOC should be updated with the proper table headings in order to be consistent with the revised Appendix A, as follows:</p> <p><del>Table 3.A: Produced Water Critical Dilutions (% Effluent) for Water Depth Differences Between the Discharge Pipe and Sea Floor of Less than 200 Meters</del></p> <p><b>Table 3:</b> Produced Water Discharge Rates</p> <p><del>CORMIX Predicted Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 Meters and in Waters Less than 200 Meters</del></p> <p><b>Table 4:</b> CORMIX Predicted Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 Meters and in Waters Less than 200 Meters</p> <p><del>CORMIX Predicted Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 Meters and in Waters Equal to or Greater than 200 Meters</del></p> <p><b>Table 5:</b> CORMIX Predicted Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 Meters and in Waters Equal to or Greater than 200 Meters</p>	<p><u>OOC requests</u> this revision to provide alignment and consistency. <b>In addition, all references to these tables should be updated within the permit text.</b></p> <p>Table 3.A is listed in the TOC, but not provided in the Appendix nor referenced in the text.</p> <p>Appendix A now includes four additional tables. With the addition of Table 3 into the Appendix, all other tables have been shifted in position. The OOC presents no opposition to the addition of Table 3; however, the addition of Tables 6, 7 and 8 are unwarranted and/or has replaced tables that appear to be omitted as an oversight (see comments below).</p>





Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale																								
			<del>Minimum Vertical Port Separation to Avoid Interference</del> <b>Table 6:</b> Minimum Vertical Port Separation to Avoid Interference <del>Critical Dilution (% Effluent) for Toxicity Limitations for Seawater to Which Treatment Chemicals Have Been Added</del> <b>Table 7:</b> Critical Dilution (% Effluent) for Toxicity Limitations for Seawater to Which Treatment Chemicals Have Been Added <del>Critical Dilution (% Effluent) for Toxicity Limitations for Freshwater to Which Treatment Chemicals Have Been Added</del> <b>Table 8:</b> Critical Dilution (% Effluent) for Toxicity Limitations for Freshwater to Which Treatment Chemicals Have Been Added																									
22.	CORMIX Tables	Appendix A – Table 2	The title of Table 2 should read as follows:  <b><u>Table 2: Produced Water Discharge Pipe Diameters</u></b>	<u>OOC requests</u> this correction for the misspelling of the word “Produced.”																								
23.	CORMIX Tables	Appendix A – Table 3	The title of Table 3 should read as follows:  <b><u>Table 3: Produced Water Discharge Rates</u></b>	<u>OOC requests</u> this correction for the misspelling of the word “Produced.”  The Results portion of this table, along with Figures 1 and 2 subsequently provided in the Appendix, might be better served in a supplemental document or fact sheet to the permit, as further comment may be necessary. This paragraph describes conditions that, based on uncertainty factors (Table 6), prompted the “adjusted” critical dilution tables provided as Tables 7 and 8. However, further information is needed regarding the uncertainty factors and how they are applied (see comment 14 & 15 below).  In addition, references to Table 3 within the permit text should be revised or deleted.																								
24.	CORMIX Tables	Appendix A – Tables 4 and 5	References to Tables 4 and 5 within the main text of the permit are incorrect.	The current permit references use of Table 5 by permittees with vertically aligned multiple discharge ports (vertical diffusers) and requirements for minimum port separation; however, this table has been omitted from the draft permit (see comment below).																								
25.	CORMIX Tables	Appendix A – Table 6	<del><b>Table 6: Uncertainty Factors Due to Variability in Currents and Seasonal Density Stratification</b></del> <b>Minimum Vertical Port Separation to Avoid Interference</b> <table><tr><th>Port Discharge Rate</th><th>Waters Less than 200 meters</th><th>Waters Greater than 200 meters</th></tr><tr><th>(bbl/day)</th><th>(meters)</th><th>(meters)</th></tr><tr><td>&gt;0 to 500</td><td>3.0</td><td>3.0</td></tr><tr><td>501 to 1000</td><td>3.0</td><td>6.0</td></tr><tr><td>1001 to 2000</td><td>4.0</td><td>6.0</td></tr><tr><td>2001 to 5000</td><td>5.0</td><td>6.0</td></tr><tr><td>5001 to 7000</td><td>5.5</td><td>6.0</td></tr><tr><td>7001 to 10,000</td><td>6.0</td><td>6.0</td></tr></table>	Port Discharge Rate	Waters Less than 200 meters	Waters Greater than 200 meters	(bbl/day)	(meters)	(meters)	>0 to 500	3.0	3.0	501 to 1000	3.0	6.0	1001 to 2000	4.0	6.0	2001 to 5000	5.0	6.0	5001 to 7000	5.5	6.0	7001 to 10,000	6.0	6.0	<u>OOC requests</u> the deletion of Table 6 in the draft permit, which replaces critical dilution tables for chemically treated seawater and provides uncertainty factors for model simulations presented in Tables 4 and 5. It is unclear how these uncertainty factors were calculated and how they are applied. Therefore, the addition of this table is confusing and unwarranted.  In addition, the OOC requests the addition of the minimum vertical port separation table, which appears to have been deleted as an oversight from the draft permit  References to Table 6 within the permit text should be revised or deleted accordingly.
Port Discharge Rate	Waters Less than 200 meters	Waters Greater than 200 meters																										
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1001 to 2000	4.0	6.0																										
2001 to 5000	5.0	6.0																										
5001 to 7000	5.5	6.0																										
7001 to 10,000	6.0	6.0																										
26.	CORMIX Tables	Appendix A – Tables 7 and 8	<del><b>Table 7: Eastern Gulf of Mexico OCS Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 meters and in Waters Less than 200 meters</b></del>	<u>OOC requests</u> the deletion of Tables 7 and 8 in the draft permit, which replace critical dilution tables for chemically treated waters and provide the “adjusted” critical dilution tables using uncertainty factors from Table 6. It is unclear if the adjusted tables are to be used by the permittee in lieu of Tables 4 and 5 or what purpose these tables serve, as Tables 6, 7 and 8 are not discussed within the main text of the permit or the Appendix in this regard.																								



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			<p><b>Critical Dilutions (Percent Effluent) for Toxicity Limitations for Seawater to which treatment chemicals have been added</b></p> <table><tr><th rowspan="2">Water Depth</th><th rowspan="2">Discharge Rate (bbl/day)</th><th colspan="3">Pipe Diameter Range (actual diameter modeled)</th></tr><tr><th>&gt;0 to 2" (1)</th><th>&gt;2 to 4" (3)</th><th>&gt;4 to 6" (5)</th></tr><tr><td rowspan="5">Less than 200 meters (shelf)</td><td>500 (0 to 1000)</td><td>0.29</td><td>0.81</td><td>1.23</td></tr><tr><td>1000 (1000 - 2000)</td><td>0.31</td><td>0.86</td><td>1.34</td></tr><tr><td>2000 (2000-4000)</td><td>0.34</td><td>0.88</td><td>1.43</td></tr><tr><td>4000 (4000-8000)</td><td>0.33</td><td>0.98</td><td>1.48</td></tr><tr><td>8000 (&gt;8000)</td><td>0.29</td><td>1.02</td><td>1.68</td></tr><tr><td rowspan="5">Deeper than 200 meters (slope)</td><td>500 (0 to 1000)</td><td>0.32</td><td>1.03</td><td>1.65</td></tr><tr><td>1000 (1000-2000)</td><td>0.28</td><td>0.99</td><td>1.65</td></tr><tr><td>2000 (2000-4000)</td><td>0.24</td><td>0.89</td><td>1.57</td></tr><tr><td>4000 (4000-8000)</td><td>0.20</td><td>0.78</td><td>1.42</td></tr><tr><td>8000 (&gt;8000)</td><td>0.17</td><td>0.66</td><td>1.24</td></tr></table> <p><del>Table 8: Eastern Gulf of Mexico OCS Critical Dilutions (Percent Effluent) for Discharges with a Depth Difference Between the Discharge Pipe Outlet and the Sea Floor of Greater than 12 meters and in Waters Greater than 200 meters</del></p> <p><b>Critical Dilutions (Percent Effluent) for Toxicity Limitations for Freshwater to which treatment chemicals have been added</b></p> <table><tr><th rowspan="2">Water Depth</th><th rowspan="2">Discharge Rate (bbl/day)</th><th colspan="3">Pipe Diameter Range (actual diameter modeled)</th></tr><tr><th>&gt;0 to 2" (1)</th><th>&gt;2 to 4" (3)</th><th>&gt;4 to 6" (5)</th></tr><tr><td rowspan="5">Less than 200 meters (shelf)</td><td>500 (0 to 1000)</td><td>0.57</td><td>3.85</td><td>16.9</td></tr><tr><td>1000 (1000 - 2000)</td><td>0.44</td><td>3.20</td><td>16.7</td></tr><tr><td>2000 (2000-4000)</td><td>0.34</td><td>2.50</td><td>5.76</td></tr><tr><td>4000 (4000-8000)</td><td>0.35</td><td>1.86</td><td>4.66</td></tr><tr><td>8000 (&gt;8000)</td><td>0.30</td><td>1.36</td><td>3.52</td></tr><tr><td></td><td>500 (0 to 1000)</td><td>0.67</td><td>11.6</td><td>29.9</td></tr></table>	Water Depth	Discharge Rate (bbl/day)	Pipe Diameter Range (actual diameter modeled)			>0 to 2" (1)	>2 to 4" (3)	>4 to 6" (5)	Less than 200 meters (shelf)	500 (0 to 1000)	0.29	0.81	1.23	1000 (1000 - 2000)	0.31	0.86	1.34	2000 (2000-4000)	0.34	0.88	1.43	4000 (4000-8000)	0.33	0.98	1.48	8000 (>8000)	0.29	1.02	1.68	Deeper than 200 meters (slope)	500 (0 to 1000)	0.32	1.03	1.65	1000 (1000-2000)	0.28	0.99	1.65	2000 (2000-4000)	0.24	0.89	1.57	4000 (4000-8000)	0.20	0.78	1.42	8000 (>8000)	0.17	0.66	1.24	Water Depth	Discharge Rate (bbl/day)	Pipe Diameter Range (actual diameter modeled)			>0 to 2" (1)	>2 to 4" (3)	>4 to 6" (5)	Less than 200 meters (shelf)	500 (0 to 1000)	0.57	3.85	16.9	1000 (1000 - 2000)	0.44	3.20	16.7	2000 (2000-4000)	0.34	2.50	5.76	4000 (4000-8000)	0.35	1.86	4.66	8000 (>8000)	0.30	1.36	3.52		500 (0 to 1000)	0.67	11.6	29.9	<p>In addition, the OOC requests the addition of the chemically treated seawater and freshwater critical dilution tables, which appear to have been deleted as an oversight from the draft permit Reference to Table 7 within the permit text is made with regard to chemically treated freshwater. No mention of Table 8 is made within the text.</p> <p>References to these tables within the permit text should be revised or deleted accordingly.</p>
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Water Depth	Discharge Rate (bbl/day)	Pipe Diameter Range (actual diameter modeled)																																																																																						
		>0 to 2" (1)	>2 to 4" (3)	>4 to 6" (5)																																																																																				
Less than 200 meters (shelf)	500 (0 to 1000)	0.57	3.85	16.9																																																																																				
	1000 (1000 - 2000)	0.44	3.20	16.7																																																																																				
	2000 (2000-4000)	0.34	2.50	5.76																																																																																				
	4000 (4000-8000)	0.35	1.86	4.66																																																																																				
	8000 (>8000)	0.30	1.36	3.52																																																																																				
	500 (0 to 1000)	0.67	11.6	29.9																																																																																				




Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording					Comment/Rationale
			Deeper than 200 meters (slope)	1000 (1000-2000) 2000 (2000-4000) 4000 (4000-8000) 8000 (>8000)	0.40 0.26 0.22 0.19	6.69 3.57 1.96 1.06	29.1 15.9 9.14 4.67	
27.	Excess Fluids	Part I.B.10 and Part V.B	<p>Edit text:</p> <p><del>“Excess Cement Slurry [Note: Discharges of cement slurry used for testing cement handling equipment are not authorized.]”</del></p> <p>Add to Miscellaneous Discharge List:</p> <p>“Unused Cement Slurry”</p> <p>Add to the Definitions in Part V.B:</p> <p>“”Unused Cement Slurry” means cement slurry used for testing of equipment or resulting from cement specification changes.”</p>					<p><u>OOO requests</u> that discharges of cement used for testing and unused cement slurry be authorized by adding a new discharge under Miscellaneous Discharges: “Unused Cement Slurry”.</p> <p>Rationale:</p> <ul style="list-style-type: none"><li>a) Equipment testing is critical to proper operation and maintenance of drilling systems. Without adequate testing, well control concerns (among others) can arise. Equipment that is not properly tested has the potential for a catastrophic environmental event. EPA must consider equipment testing/commissioning as “proper operation and maintenance” since if permittees do not test/commission equipment then a permittee cannot truly say that they are complying with this permit requirement.</li><li>b) The discharge of such fluids would meet all monitoring and limitations of the permit for those fluid types, and since such fluids had not been “used” they would have a lower pollutant potential than the used fluids (which are authorized for discharge).</li><li>c) Prior EPA determinations have been received which authorized such discharges (and the draft fact sheet does not now provide a substantive justification for now prohibiting such discharges).</li><li>d) Authorizing discharge will avoid substantive safety risks for managing bulk fluids back to shore including lifting large, heavy containers at sea; transportation risks at sea and on-land and; tank/container cleaning associated with solidified cement (It is difficult to inhibit cement from setting up. Therefore, transport to shore is expected to be solidified blocks in their containers). Safety incidents have occurred during the removal of hardened cement from cutting boxes using jack hammers. One operator had two reported hand/finger injuries occur as a result of disposing the cement test mix from the commissioning of one cement unit on a new build drillship. This also consumes limited onshore disposal facility capacity for essentially benign materials. Finally, the transport of these materials involves environmental consequences including increased air emissions from marine and road transport.</li></ul> <p>OOO presents here additional information on the discharge quantities to support approval of these discharges. The following are typical volumes of cement for the subject issue:</p> <ul style="list-style-type: none"><li>1. New drilling units (MODU or platform rig) commissioning/equipment testing: 100-200 bbls per ship. This is slurry used to test pumping functions and verify flow paths. Assuming 3-7 newly constructed drilling units per year enter the Gulf (1), this is equivalent to 600-1400 bbl/yr of slurry that may be discharged annually.</li><li>2. Out of the rigs that come to the GOM, some of those rigs/operators choose to do their commissioning before they enter the GOM and cement slurry from the test mix is not discharged in the GOM. The percentage of rigs that choose to go this route could be as high as 50%.</li><li>3. When cement slurry from a test mix cannot be discharged it must be caught in metal containers (i.e. cutting box, etc). The container must be sent in to shore to be disposed of before the cement slurry “sets up” or gets hard. Any time a liquid is transported it creates a greater risk of loss of</li></ul>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale								
				<p>primary containment. The lifts that must be made to move this container from the rig to a boat and then to the shore also introduce a higher risk for an accident or injury. This in turn puts more personnel in the line of fire and increases exposure rate versus discharging the cement slurry text mix while mixing it on the rig.</p> <p>4. Other Discharges of Unused Cement Slurry</p> <ul style="list-style-type: none"><li>○ Repairs: when a cement system malfunctions or equipment must be upgraded or changed out for specific job, the existing cement must be removed, repairs made and testing conducted to ensure proper operation. There are two concerns in this case with a prohibition against the discharge:<ul style="list-style-type: none"><li>□ If the malfunction occurs during a cementing job, the existing cement must be washed out quickly (before it sets), the repair made, the testing performed and then new cement mixed. Discharge is the most effective means to support rapid repair since typically weight and space constraints prevent holding empty containers offshore for such a contingency. This can involve potential well control issues if the cement system cannot be returned to service quickly.</li><li>□ More generally, even if no cement job is in progress, the testing after repair is critical to assure all systems work as designed and provide cement that can comply with well design requirements.</li></ul></li></ul> <p>Estimated volumes are 5-100 bbls per event. OOC estimates this occurrence is rare on a per rig basis. Currently there are ~ 99 rigs working in the GOM (2). Assuming one event per year per rig this equates to ~500-10,000 bbls/year of slurry discharged.</p> <ul style="list-style-type: none"><li>○ Cement not meeting the specifications for a well job: 20-100 bbls. OOC expects this to also be a rare occurrence. Note- if this occurs when a well is in a productive interval, the cement must be washed out of the unit to prevent setting. Then a new batch needs to be quickly mixed to prevent well control issues. Discharge is the most effective means to support rapid response since typically weight and space constraints prevent holding empty containers offshore for such a contingency. This can involve potential well control issues if the cement system cannot be returned to service quickly.</li></ul> <p>A review of BOEM data (3, 4) indicate &gt; 100 wells per year are drilled in the Gulf. Assuming one event per well per year yields 2000-10,000 bbls/yr of slurry discharged.</p> <p>In summary, annual expected discharges of the proposed “Unused Cement Slurry” could be on the order of :</p> <table><tr><td>Commissioning of new drilling units s=</td><td>600-1400 total bbls/year</td></tr><tr><td>Repairs=</td><td>500-10,000 total bbls/year</td></tr><tr><td>Off spec cement =</td><td>1000-10,000 total bbls/year</td></tr><tr><td>Total=</td><td>2100 - 21,400 total bbl/year</td></tr></table> <p>Compare this to a single well’s discharge of authorized Excess Cement Slurry (as authorized and defined in the permit): though highly variable depending on many factors, this is on the order of approximately 100-400 bbls (including pit cleanouts after a job). The majority of this is associated with riserless operations.</p>	Commissioning of new drilling units s=	600-1400 total bbls/year	Repairs=	500-10,000 total bbls/year	Off spec cement =	1000-10,000 total bbls/year	Total=	2100 - 21,400 total bbl/year
Commissioning of new drilling units s=	600-1400 total bbls/year											
Repairs=	500-10,000 total bbls/year											
Off spec cement =	1000-10,000 total bbls/year											
Total=	2100 - 21,400 total bbl/year											

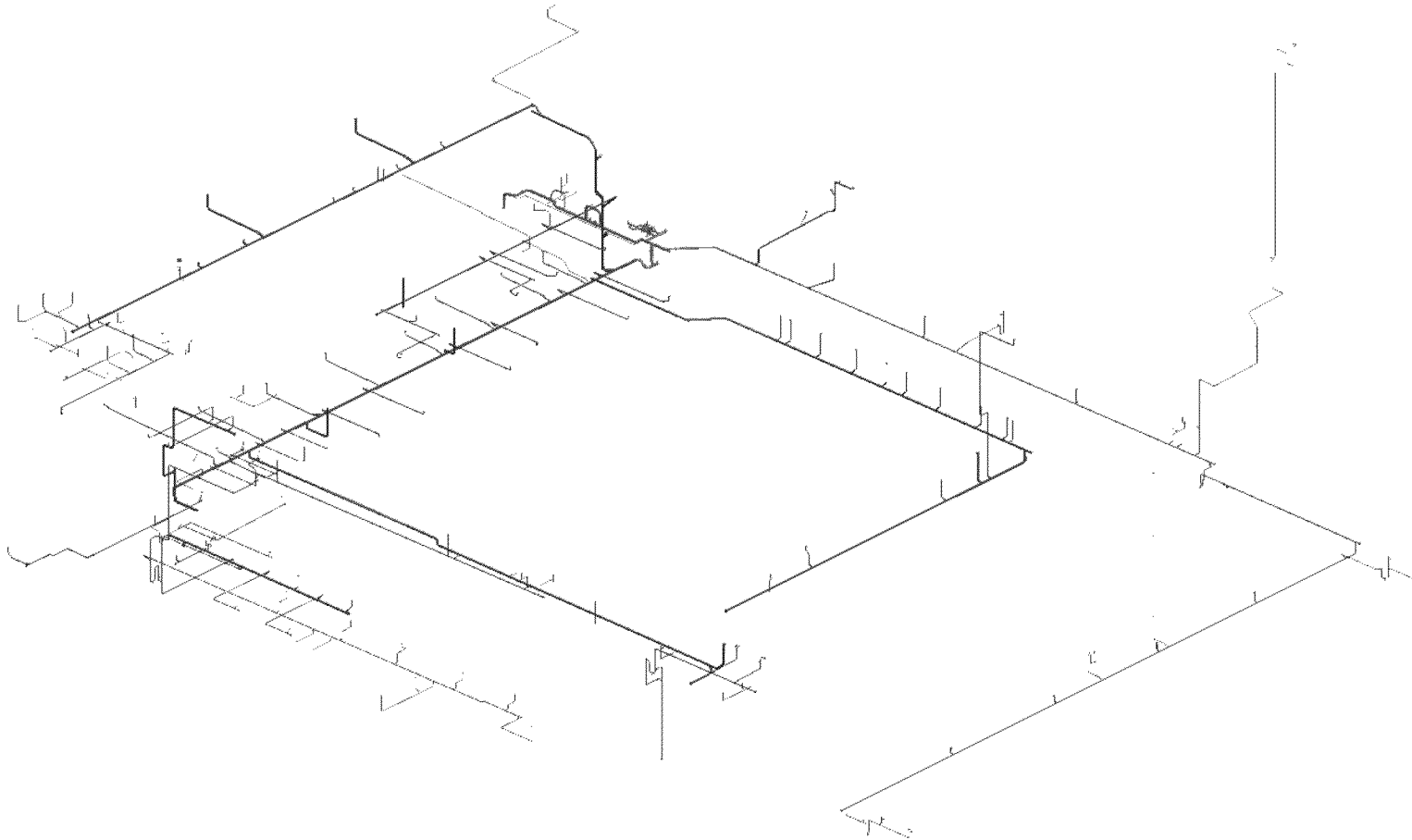


Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
				<p>Assuming 100 wells/year are drilled in the Gulf, this yields approximately 10,000-40,000 bbls of Excess Cement Slurry already authorized by the current permit (and continued for authorization in the proposed permit) for discharge. The volumes shown above for the proposed Unused Cement Slurry are of the same order of magnitude as existing authorized excess cement slurry discharges (and are probably significantly lower). Given this, and typical discharge at or near the surface with immediate dispersion into the water column, the environmental impacts are expected to be insignificant.</p> <p>Note: The values provided in the above are based on worst case scenarios. Numbers to date may be lower based on current MODU activity in the Gulf of Mexico.</p> <p>As an alternative, OOC recommends a joint industry study be performed to assess the overall environmental and safety impacts of this discharge.</p> <p><u>References</u></p> <ol style="list-style-type: none"><li>1. Personal communication, Kuehn – Rigzone, 4/23/12.</li><li>2. Rigzone- Rig Report: Offshore Rig Fleet by Region <a href="http://www.rigzone.com/data/rig_report.asp?rpt=reg">http://www.rigzone.com/data/rig_report.asp?rpt=reg</a></li><li>3. <a href="http://www.boem.gov/uploadedFiles/BOEM/Newsroom/Offshore_Stats_and_Facts/Gulf_of_Mexico_Region/OCSDrilling.pdf">http://www.boem.gov/uploadedFiles/BOEM/Newsroom/Offshore_Stats_and_Facts/Gulf_of_Mexico_Region/OCSDrilling.pdf</a></li></ol>
28.	BMP3 Requirement	Part IV	Delete requirement to develop and implement BMP3	<p><u>OOO requests</u> that the BMP3 requirements be removed from the permit. OOC is providing the attached table (below and as Attachment D) outlining the BMP3 requirements and a cross reference to other regulations that require the same or redundant information.</p> <p>In summary:</p> <ol style="list-style-type: none"><li>1. CWIS are addressed in accordance with Part I.D.3 of permit</li><li>2. NAFs are addressed in Appendix 7 of 40 CFR Part 435 Subpart A and Part 1.B.2.c</li><li>3. Maintenance Waste can be addressed as outlined in Part I.C.6 of GMG290000 as a standalone BMP</li><li>4. All other requirements are addressed in numerous other BOEM/BSEE requirements.</li></ol> <p></p> <p>BMP3 Comparison to Other Federal Requir</p> <p>Therefore, to reduce administrative burden, OOC recommends all of Part IV be removed from the permit.</p>
29.	Miscellaneous Discharges	I.B.10	Add “brine and water based mud discharge at the seafloor for temporary well abandonment” to the list of Miscellaneous Discharges.	<p><u>OOO is requesting</u> the addition of brine and/or water based mud discharge at the seafloor to the list of Miscellaneous Discharges.</p> <p>The final phases of many temporary well abandonments (a prelude to permanent abandonment) could involve the discharge of clean brine or water-based mud from the upper most portion of the well at the seafloor. This would occur because a riser is not present (or has been disconnected from the abandoned well). The producing reservoir has been isolated in earlier stages of the abandonment with cement and</p>



Comment No.	Type/Category	Permit Section Ref.	Revised Permit Wording	Comment/Rationale
				plugs, and the tubing/annulus/casing has been scoured by prior well fluid circulations. Further, static sheen, oil and grease and priority pollutant limitations would have been already met on prior discharges of the brine (in earlier stages of the abandonment). Any water-based mud usage would have also been shown compliant by earlier drilling fluid monitoring. Finally, the brine and muds are engineered fluids, meeting detailed specifications; one of which is no hydrocarbon content is allowed (for safety and performance reasons).
30.	Miscellaneous Discharges of Seawater and Freshwater which have been chemically treated	Part I.B.11	<p>Revise and reword section as follows:</p> <p>Excess <del>seawater</del> which permits the continuous operation of fire control and utility lift pumps, Excess <del>seawater</del> from pressure maintenance and secondary recovery projects, Water released during training of personnel in fire protection, <del>Seaw</del>Water used to pressure test piping and pipelines, Ballast water, Once through non-contact cooling water, <del>Seaw</del>Water used as piping or equipment preservation fluids, and <del>Seaw</del>Water used during Dual Gradient Drilling.</p> <p>Water includes both seawater and freshwater discharges.</p>	<p>OOC requests that a change be made to the Title and list for “Miscellaneous Discharges of Seawater and Freshwater which have been chemically Treated”. This will be a word change from “Seawater” and “Freshwater” to “Water”. This change will ensure that both “Seawater” and “Freshwater” are included in the chemically treated discharge list.</p>
31.	Summary of Effluent Limitations, Prohibitions, and Monitoring Requirements for the Eastern Gulf of Mexico NPDES General Permit for Existing Sources and New Sources (Refer to permit for specific, enforceable requirements)	Table 1 - Well Treatment, Completion, and Workover Fluids (includes packer fluids) – Measurement Frequency	<p>For chronic toxicity: Once/<del>2</del> month when discharging <del>(or</del> <del>semiannually after passing three consecutive bimonthly test</del></p> <p>For acute toxicity: Once/month when discharging <del>discharge (or</del> <del>semiannually after passing three consecutive tests)</del></p>	<p>OOC requests this change for consistency with requested changes in comments No. 9-10.</p>

**ATTACHMENT A**  
**COMMENT NO. 4**

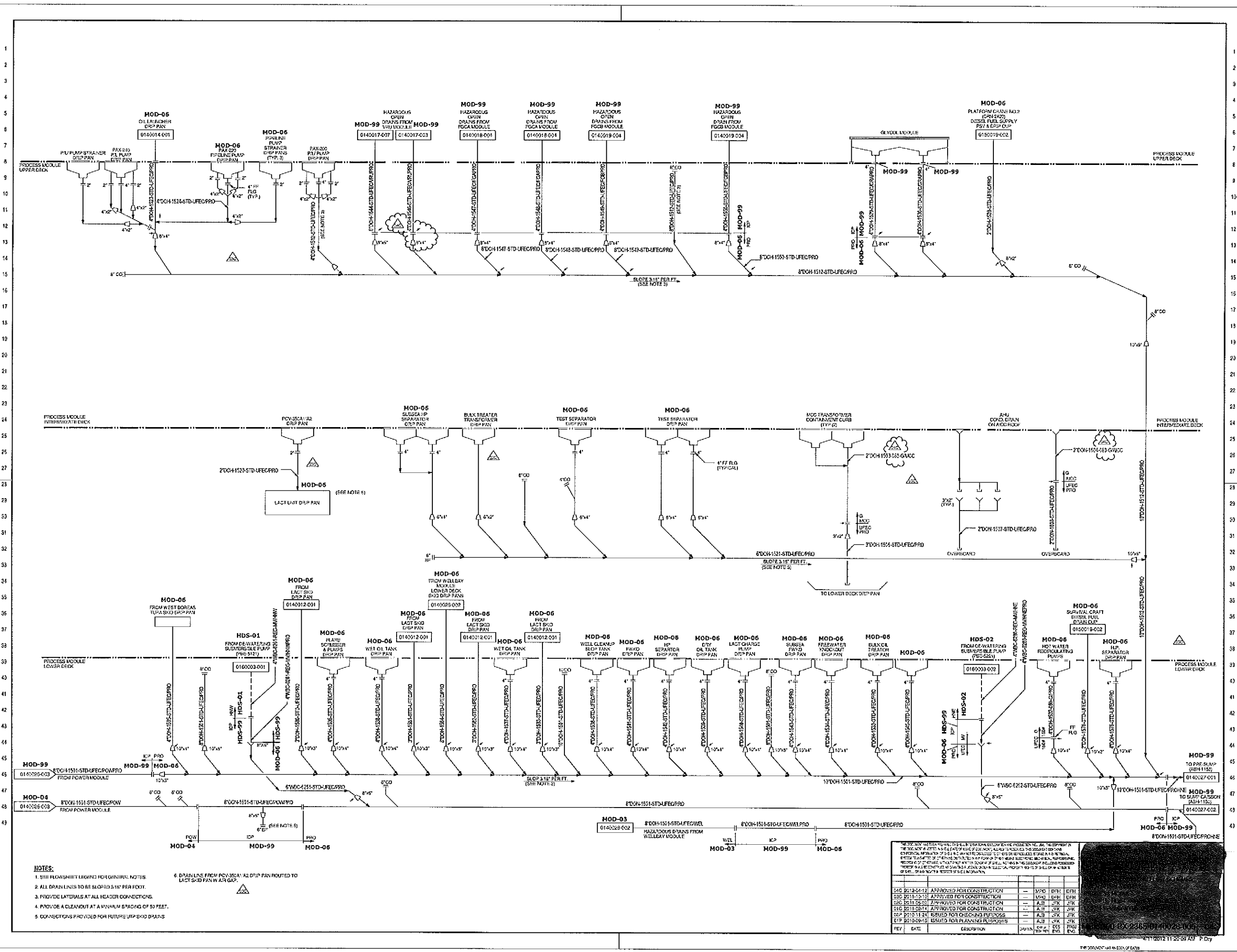


Model Rotate

Example drain system isometric drawing for offshore platform- vertical pipe stubs connect to collection systems (e.g. skid pans). Effluents are collected and routed to presumpt and/or sump pile emergency sump (not shown on diagram- see example flow diagrams)



**ATTACHMENT B**  
**COMMENT NO. 4**







**ATTACHMENT C**

**COMMENT NO. 16**

## James Durbin

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**From:** Kuehn, Robert B SEPCO-UAS/E/USOFF  
**Sent:** Monday, February 27, 2012 10:36 AM  
**To:** 'Smith, Joe P'  
**Subject:** RE: EPA R 4 Accepts Source Water Charact Study

-----Original Message-----

From: Smith, Joe P [mailto:joe.p.smith@exxonmobil.com]  
Sent: Monday, February 27, 2012 10:31 AM  
To: Kuehn, Robert B SEPCO-UAS/E/USOFF  
Cc: Gallaway, Benny (BGallaway@lgl.com); Fechhelm, Bob ; Verret, Allen; Barringer, Jennifer (jennifer.j.barringer@conocophillips.com); Bradford, Cary V.; Hutson , Margaret (margaret.b.hutson@conocophillips.com); Wilson, John A. ; Ayers, Bob (BOBO60@aol.com); Elliot, Frank (Frank.Elliott@bp.com); Frazer, Ross (rfrazer@atpog.com); Hoggan, James ; Johnson, Jennifer (jljohnson@atpog.com); Lamon, Sofia; Maness, Kathryn; Meador, Tammy (Tammy\_Meador@murphyoilcorp.com); Northington, Gary; Painter, Paul G (ppainter@hess.com); Pennington, Shelby G; Spires, Joanna (Joanna\_Spires@murphyoilcorp.com); Webster, Anthony (awebster@hess.com); Wolinsky, Gary  
Subject: EPA Region 4 Accepts Industry-Wide Cooling Water Intake Structure Source Water Characterization Study as Meeting Permit Requirements

The trailing notes confirm that the Cooling Water Intake Structure Source Water Biological Baseline Characterization Study submitted by industry has been accepted by EPA Region 4 as meeting the relevant requirements for the participating companies.

-----Original Message-----

From: Karrie-Jo Shell [mailto:Shell.Karrie-Jo@epamail.epa.gov]  
Sent: Monday, February 27, 2012 10:23 AM  
To: Smith, Joe P  
Subject: RE: Follow Up on Cooling Water Intake Structure Source Water Characterization Study for Region 4

Yes.  
Karrie-Jo Robinson-Shell, P.E.

From: "Smith, Joe P" <joe.p.smith@exxonmobil.com>  
To: Karrie-Jo Shell/R4/USEPA/US@EPA  
Cc: "Kuehn, Rob (robert.kuehn@shell.com)" <robert.kuehn@shell.com>  
Date: 02/27/2012 11:21 AM  
Subject: RE: Follow Up on Cooling Water Intake Structure Source Water Characterization Study for Region 4

Karrie-Jo:

Thank you very much for your response. For confirmation purposes, I

understand from your note that the participants in the Source Water Biological Baseline Characterization Study project have met their requirements for Source Water Biological Baseline Characterization Studies as specified in NPDES Permit GEG460000.

The following companies participated in this project.

Anadarko Oil and Gas  
ATP Oil and Gas Corp  
BP  
Chevron  
ConocoPhillips  
Eni Petroleum  
ExxonMobil  
Hess Corporation  
Murphy Oil Company  
Nexen Petroleum  
Shell  
StatoilHydro  
Transocean  
Frontier Drilling  
Pride International Drilling

Best regards,

Joe Smith

-----Original Message-----

From: Karrie-Jo Shell [mailto:Shell.Karrie-Jo@epamail.epa.gov]

Sent: Monday, February 27, 2012 10:11 AM

To: Smith, Joe P

Cc: Mark Nuhfer; Bridget Staples

Subject: Re: Follow Up on Cooling Water Intake Structure Source Water Characterization Study for Region 4

Dr. Smith,

I apologize for taking so long to complete my review.

I looked at the June 2009 report titled, "Gulf of Mexico Cooling Water Intake Structure: Source Water Biological Baseline Characteristic Study" prepared by LGL Ecological Research Associates.

This report, which was based on findings from desktop literature review, compiled a comprehensive list of marine and coastal fish and invertebrate species potentially subject to entrainment in the northern GOM. Areas investigated included the shallow waters immediately offshore Mississippi, offshore Alabama and offshore Florida, as well as areas depths up to, and in some cases beyond, 1000 meters.

Based on my review, the results of the LGL desktop study meet the biological characteristics requirements of Part I.B.3.a - Baseline Study Requirements.

The results of the report will be used to develop an entrainment impact assessment for purposes of complying with Part I.D.3 (Cooling Water Intake Study) of Region 4's General NPDES Permit for Offshore Oil and Gas Operations, permit no. GEG460000.

Karrie-Jo Robinson-Shell, P.E.

From: "Smith, Joe P" <joe.p.smith@exxonmobil.com>  
To: Karrie-Jo Shell/R4/USEPA/US@EPA  
Cc: "Kuehn, Rob (robert.kuehn@shell.com)"  
<robert.kuehn@shell.com>  
Date: 12/02/2011 11:28 AM  
Subject: Follow Up on Cooling Water Intake Structure Source  
Water  
Characterization Study for Region 4

Karrie-Jo

I am writing to follow up on our exchange of phone messages and an email with a suggestion on how to move forward with the cooling water intake structure source water study for Region 4.

We have submitted a report based on our Gulf-wide fishery data analysis and supplemented that report with additional Region-4-specific evaluations. These documents are based on the extensive SEAMAP fishery database collected over two decades across the entire Gulf and significant research on the life history parameters of important species. We discussed your suggested methods for extrapolating potential impact estimates to species not specifically enumerated by SEAMAP with the consultants we engaged to prepare both the Region 6 Source Water study and the supplemental material for Region 4. They were reluctant to adopt the suggested extrapolations since they felt that they involved assumptions that went beyond good scientific practice.

With respect to the completeness of our current characterization of Gulf of Mexico fisheries, we acknowledge that uncertainties remain about certain aspects of Gulf of Mexico fisheries. However, given the extensive database already available for Gulf of Mexico fishery population analysis, it is unlikely that any new data collection program that could be conducted over the short time provided in the permit will significantly add to life history information for impact projection. We believe that the report we have submitted is as comprehensive as possible and that, in that providing impact projections for species where appropriate data are available, it actually goes beyond the specified requirements for a source water characterization study.

Given this situation, our suggestion for moving forward is as follows.

We respectfully request that Region 4 accept the materials submitted to date as meeting the source water characterization requirements for the participating companies. We note that the Region 6 entrainment monitoring study, now in its fourth quarter of sampling for a two-year study, is collecting extensive new data about the potential for entrainment in deeper waters of the Gulf of Mexico. We also ask that Region 4 acknowledge that it will consider the results of the Region 6 entrainment study for compliance with the corresponding Region 4 requirement.

In light of the existing permit provision for entrainment monitoring, our suggested approach allows Region 4 to retain the flexibility to require additional field data collection, if appropriate. For example, entrainment monitoring measurements could both address the presence or absence of certain species as well as provide estimates of potential entrainment for all species. Our suggestion also allows for the timely completion of the required Source Water Characterization phase for the participating companies.

We appreciate Region 4's willingness to consider this suggestion and invite you to contact us if you have any questions about our approach.

Best regards,

Joe Smith



Joseph P Smith  
ExxonMobil Upstream Research Company URC-URC-SW502  
713 431 4532  
Address for US Mail  
PO Box 2189  
Houston TX 7722-2189  
Shipping address  
3319 Mercer Street  
Houston TX 77027

**ATTACHMENT D**

**COMMENT NO. 28**

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
<b>D.1.a</b>	name and description of facility, a map illustrating the location of the facility and adjacent receiving waters, and other maps, plot plans or drawings, as necessary;	30 CFR 250.211 (Exploration Plans); 30 CFR 250.241 (DOCDs/DPPs)	EPs/DOCDs must include a description of activities, proposed schedule, maps, description of equipment, description of safety and pollution prevention features for the drilling unit.
<b>D.1.b</b>	overall objectives (both short-term and long-term) and scope of the plan, towards reduction of pollutants, anticipated dates of achievement of reduction, and a description of means for achieving each reduction goal;	30 CFR 250.1909(a)	The Safety and Environmental Management System (SEMS) must establish goals and performance measures, demand accountability for implementation, and provide necessary resources for carrying out the program.
<b>D.1.c</b>	a description of procedures relative to spill prevention, control and countermeasures and a description of measures employed to prevent storm water contamination, where the storm water can reasonably be expected to reach waters of the U.S. prior to treatment	30 CFR 250.211 & 241 30 CFR 250.219 and 250 30 CFR 250.1916 & 1918	For EPs and DOCDs requiring Florida CZM (Eastern GOM), the plans must include measures to prevent discharge of oils and greases during rainfall and routine operations. 250.219 and 250 require development and implementation of oil spill response plans, including worst case modeling. OSRP information must be provided with the EP and DOCD. 250.1916 establishes requirements for mechanical integrity under SEMS. 250.1918 establishes requirements for emergency response and control under SEMS.
<b>D.1.d</b>	a description of practices involving preventive maintenance, housekeeping, record keeping, inspections, and plant security	30 CFR 250.300 Pollution Prevention 30 CFR 250.301 Inspection 33 CFR 106 Security Plans 30 CFR 250.1913	BOEM requirements for pollution prevention and inspection of offshore facilities are described in 30 CFR 250.300 & 301. Security plan requirements for OCS activities are described in 33 CFR 106. 250.1913 establishes criteria for operating procedures under SEMS.
<b>D.1.e</b>	a description of a waste minimization assessment (WMA)	30 CFR 250.217 & 248	EPs and DOCDs must include a list of solid

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

[illegible]

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	<p>(5) analyses of chemical use and waste generation, including input parameters for all pollutants, overall facility material balances and as necessary, internal process balances, for all pollutants. (When actual measurements of the quantity of a chemical entering a wastewater or storm water stream are not readily available, reasonable estimates should be made based on best engineering judgment.) The analyses should address reasons for using particular chemicals, and/or measures or estimates of the actual and potential chemical discharges via wastewater, wastewater sludge, storm water, air, solid waste or hazardous waste media.</p> <p>(ii) <u>Pollutant Reduction Methods</u> - The WMA plan shall include, at a minimum, the following means of reducing pollutant discharges in wastewater streams or of otherwise minimizing wastes:</p> <p>(1) process related source reduction measures, including any or all of the following, as appropriate: improved process controls; reduction in use of toxic or hazardous materials; chemical modifications and/or material purification; chemical substitution employing non-toxic or less toxic alternatives; and equipment upgrades or modifications or changes in equipment use.</p> <p>(2) housekeeping/operational changes, including waste stream segregation, inventory control, spill and leak prevention, equipment maintenance; <u>and</u> employee training in areas of pollution prevention, good housekeeping, and spill prevention and response;</p> <p>(3) in-process recycling, on-site recycling and/or off-site recycling of materials (such as non-hazardous rags, pads and filters, antifreeze, lube oil, cooking oil, etc);</p> <p>(4) following all source reduction and recycling practices,</p>		

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	<p>wastewater treatment process changes, including the use of new or improved treatment methods, such that treatment degradation products are less toxic to aquatic or human life; and</p> <p>(5) other means as agreed upon by the permit issuing authority and the permittee.</p>		
<b>D.1.e(iii)</b>	<p><u>Storm Water Evaluation</u> - For storm water discharges and instances where storm water enters the wastewater treatment/disposal system or is otherwise commingled with wastewater, the BMP3 shall evaluate the following potential sources of storm water contamination, at a minimum:</p> <ul style="list-style-type: none"> <li>(1) loading, unloading and transfer areas for dry bulk materials or liquids;</li> <li>(2) outdoor storage of raw materials or products;</li> <li>(3) outdoor processing activities;</li> <li>(4) dust or particulate generating processes;</li> <li>(5) on-site waste and/or sludge disposal practices.</li> </ul> <p>The likelihood of storm water contact in these areas and the potential for spills from these areas shall be considered in the evaluation. The history of significant leaks or spills of toxic or hazardous pollutants shall also be considered. Recommendations for changes to current practices which would reduce the potential for storm water contamination from these areas shall be made, as necessary.</p> <p>Practices which reduce pollutant loading in wastewater or storm water discharges with a consequent increase in solid hazardous waste generation, decrease in air quality, or adverse affect to groundwater shall not be considered</p>	30 CFR 250.211 & 241	For EPs and DOCDs requiring Florida CZM (Eastern GOM), the plans must include measures to prevent discharge of oils and greases during rainfall and routine operations.

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	waste reduction for the purposes of this assessment planning.		
<b>D.2</b>	<p>Maintenance waste, such as removed paint and materials associated with surface preparation and coating operations, must be contained to the maximum extent practicable to prevent discharge. This includes airborne material such as spent or oversprayed abrasives, paint chips, and paint overspray. Measures such as vacuum abrasive blasting, covering grated areas with plywood, surrounding the area with canvas tarps and similar measures must be employed to capture as much material as practicable.</p> <p>Prior to conducting sandblasting or similar maintenance activities, operators shall operate in accordance with company or site specific BMPs as needed. BMPs utilized must include specific containment measures which should be implemented to the maximum extent practicable. These measures should include, but not limited to:</p> <ol style="list-style-type: none"> <li>enclose, cover, or contain blasting, sanding, painting, or mechanical cleaning activities, to prevent abrasives, dust, and paint chips from reaching the receiving water.</li> <li>contain blasting, sanding, painting, or mechanical cleaning activities performed over open water.</li> <li>prevent blasting, sanding, painting, or mechanical cleaning activities performed during windy and high precipitation conditions which render containment ineffective.</li> <li>collect spent abrasives routinely and properly store pending shipment to shore for proper disposal.</li> <li>mix paints and solvents in designated areas away</li> </ol>	n/a	n/a

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	<p>from drains, ditches, piers, and surface waters, preferably indoors or under cover.</p> <p>f. have absorbent and other cleanup items readily available for immediate cleanup of spills.</p> <p>g. allow empty paint cans to dry before disposal.</p> <p>h. use plywood and/or plastic sheeting to cover open areas between decks when water blasting, sandblasting and/or mechanical cleaning activities.</p>		
<b>D.3</b>	<p>Operators are not required to use specific BMPs for NAFs if all cuttings are monitored in accordance with Appendix 7 of 40 C.F.R. Part 435, subpart A. (This special exemption for NAFs cuttings does not excuse the facility from developing and implementing BMPs for other areas/operations at the site.)</p> <p>The following specific best management practices and pollution prevention activities are required in the BMP3 Plan when operators elect to control NAF discharges associated with cuttings by a set of BMPs...</p>		If operators choose to monitor cuttings in accordance with Appendix 7 of 40 CFR Part 435 Subpart A and Part 1.B.2.c, these BMPs are not required.
<b>E.</b>	The BMP3 plan shall contain a written and dated statement (with signatures) from the individual responsible for development and implementation of the BMP3 plan stating that the review has been completed and that the BMP3 plan fulfills the objective and specific requirements set forth in Parts IV. A. and D., above. The statement shall be publicized or made known to all facility employees.	30 CFR 250.1909(e)	Requires operators to develop and endorse a written description of safety and environmental policies.
<b>F.</b>	The operator shall certify that its BMP3 plan is complete, on-site, and being implemented. This certification shall identify the NPDES permit number and be signed by an authorized representative of the operator. This certification shall be kept with the BMP3 plan. The	30 CFR 250.1909(e)	Requires operators to develop and endorse a written description of safety and environmental policies.



## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	certification shall be made no later than one year from the effective date of coverage under this general permit, and must be submitted to EPA Region 4.		
<b>G.</b>	<p>The BMP3 plan shall be documented in narrative form, and shall include any necessary plot plans, drawings or maps, and shall be developed in accordance with good engineering practices. At a minimum, the BMP3 plan shall contain the planning, development and implementation, and evaluation/re-evaluation components. Examples of these components are contained in "Guidance Document for Developing Best Management Practices," EPA document no. 833-B-93-004 (1993).</p> <p>The permittee shall maintain a copy of the BMP3 plan and related documentation (e.g., training certifications, summary of the monitoring results, records of NAF-equipment spills, repairs, and maintenance) at the facility and shall make the BMP3 plan and related documentation available to EPA upon request.</p>	30 CFR 250.1909; 30 CFR 250 211 & 241	<p>1909 requires proper documentation of the SEMS and that it is available at all field and office locations.</p> <p>EPs and DOCDs provide similar documentation, but not in the BMP format.</p>
<b>H.</b>	A Best Management Practices Committee (Committee) should be established to direct or assist in the implementation of the BMP3 plan. The Committee should be comprised of individuals within the plant organization who are responsible for developing, implementing, monitoring of success, and revision of the BMP3 plan. The activities and responsibilities of the Committee should address all aspects of the facility's BMP3 plan. The scope of responsibilities of the Committee should be described in the plan.	30 CFR 250.1909(b)	Requires operators appoint management representatives who are responsible for establishing, implementing and maintaining an effective SEMS.
<b>I.</b>	Employee training programs shall inform appropriate personnel of the components and goals of the BMP3 plan	30 CFR 250.1915 SEMS	BOEM SEMS requires operators to implement a training program for the Safety

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	and shall describe employee responsibilities for implementing the plan. Training shall address topics such as good housekeeping, materials management, record keeping and reporting, spill prevention and response, as well as specific waste reduction practices to be employed. The plan shall identify periodic dates for such training.		and Environmental Management System. In addition, other plans such as Oil Spill Response Plans and Facility Security Plans require employee training and drills.
J.	The BMP3 plan shall be developed and implemented within one year after the effective date of this coverage under this general permit.	30 CFR 250.1909(d)	Requires at least an annual review of the SEMS program to determine if it continues to be suitable, adequate and effective.
K.	<p>The plan shall be reviewed by the permittee's designated responsible party (such as the facility drilling engineer) to ensure compliance with the BMP3 plan purpose and objectives set forth above.</p> <p>If following review by EPA, the BMP3 plan is determined insufficient, EPA may notify the permittee that the BMP3 plan does not meet one or more of the minimum requirements of this Part. Upon such notification from the Director, or authorized representative, the permittee shall amend the plan and shall submit to the Director a written certification that the requested changes have been made. Unless otherwise provided by the Director of the Water Protection Division, EPA Region 4, the permittee shall have 30 days after such notification to make the changes necessary</p>	30 CFR 250.1909(c)	Requires designation of specific management representatives who are responsible for the SEMS program.
L.	The permittee shall modify the BMP3 plan whenever there is a change in design, construction, operation, or maintenance, pertaining to the facility which has a significant effect on the potential for the discharge of pollutants to waters of the United States <u>or</u> if the plan proves to be ineffective in achieving the general	30 CFR 250.1912	Describes the Management of Change criteria for the operator's SEMS.

## Comparison of BMP3 Requirements & Other Federal Offshore Requirements

GEG460000		Similar Requirement	
Section	Requirement	Citation	Requirement
	<p>objectives of reducing pollutants in wastewater or wet weather discharges.</p> <p>At a minimum, the BMP3 plan shall be reviewed once every five years, and amended within three months if warranted. Any such changes to the BMP3 plan shall be consistent with the objectives and specific requirements listed in this permit. All changes in the BMP3 plan shall be reviewed by the operator's drilling engineer and authorized on-site representative.</p> <p>At any time, if the BMP3 plan proves to be ineffective in achieving the general objective of preventing and minimizing the discharge of toxic pollutants and/or NAF-wastes, the BMP3 plan be subject to modification. If the BMP3 requirements in the permit are modified, the BMP3 plan must be modified to incorporate the revised BMP3 requirements within three months.</p> <p>In particular, for those NAF-waste streams controlled through BMPs, the operator shall amend the BMP3 plan within 30 days whenever there is a change in the facility or in the operation of the facility which materially increases the generation of those NAF wastes or their release, or potential release to the receiving waters.</p> <p>Modifications to the plan may be reviewed by EPA in the same manner as described above.</p>		